

april 1964

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FICTION

volume 47

Beyond the
Reach of Storms

donald malcolm

william spencer

steve hall

p. f. woods

james white

survey report 1963

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volume 47

no. 141

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survey report

Once again my thanks to all those interested readers who took the time and trouble to fill in and post the questionnaire included in the January issue. Although there was not a great deal of time available for replies, we received just over 350 by February 1st (a period of five weeks as opposed to eight for the 1958 Survey which returned 500 replies) and they came from a very wide section of the public.

Once again, too, there have been rapid shifts in many of the sections during the five years since we last asked a series of similar questions. To enable you to compare the difference, the 1958 figures are shown *in brackets*.

Age : 26.1 years (30.8).

Male readers 92% (90%); Married 33% (54%); Single 67% (49%).

Age Groups: 31% under 20 years (18%); 27%, 20-24 years (21%); 14%, 25-30 years (21%); 14%, 31-40 years (22%); 8%, 41-50 years (12%); 6%, over 50 years (6%).

Salary Groups: Males only

19% No income (11%); 4% under £250 (9%); 15%, £250 - £500 (17%); 15%, £500 - £750 (24%); 17%, £750 - £1000 (14%); 30%, over £1000 (25%).

Degrees: 11% (28%).

Technical Employment : 45% (52%).

13% Engineering (13%); 7% Electrical Engineering (—); 4% Computers (5%); 3% Teachers (5%); 5% Chemical, Pharmaceutical, Doctors, Lab. Technicians (9%); 7% Radio and T.V. (3%); 6% Others, various (6%).

Non-Technical Employment : 55% (48%).

23% Students (14%); 7% Executive Admin (6%); 3% Civil Service (5%); 4% Office Clerical (5%); 18% Others, various (18%).

Educational Groups :

7% Secondary (14%); 39% Grammar (27%); 9% Technical and College (21%); 15% University (21%); 7% Public or Private (4%); 23% various (including elementary) (13%).

Library: 77% stated they belonged to one or more (74%).

S-F Book Club Membership: 27% (28%).

Preference for novels or short stories:

40% preferred novels; 33% preferred short stories; 27% had no preference.

• • • • 1963

Average number of other magazines read: 3 (3)

20% stated that they bought no other except *New Worlds Science Fiction*.

Number of s-f paperbacks bought per month: 4 (question not asked in 1958)

Hobbies: Averaged 2 per person (3).

57% Reading and/or Literature (33%); and 17% added Science Fiction (16%); 17% Photography (16%); 31% Sport (23%); 18% Music (18%); 20% Indoor Games (13%); 12% Astronomy (10%); 2% Do-it-yourself (15%); 8% Motoring or M/c (9%); 4% Astronautics (—); 10% Philately (—); 7% Model-making (—); 10% Jazz (—).

A wide variety of hobbies showed up which could not be loosely classified. Jazz, missing in 1958 but with a 6% interest in 1955, has returned but not one single questionnaire showed dancing as a hobby.

At this stage, when *New Worlds Science Fiction* has been suffering from steadily declining sales during the past four years, it is almost too easy to diagnose from the above statistics what has been happening. In 1958 we had lost 18% of the readership between 25 and 40 years of age and in this Survey another 14. have disappeared, plus an additional 4% over that age. The average age of the readership has come down from just over 30 years to 26, with a big jump in the under-20's (an increase of 13%) and an increase of 9% in the number of students reading s-f regularly.

The obvious assumption here, taking our three Surveys in ten years, is that the older reader is no longer regularly buying s-f magazines (the average has halved in ten years) and the *majority* of s-f readers are buying more and more paperbacks in this medium. The replies to this question ranged from 1 a month to *as many as 20!* I would even go as far as to assume that the majority of older readers have given up the magazines entirely and now only buy paperback s-f. This is evident from the number of paperbacks published or distributed here each month (an average of 8) with circulations around 30,000 copies each (except the imported editions which are around 10,000) against an average of 3 per month and half the foregoing circulations four years ago—when s-f magazine sales were twice what they are today.

This is the final story in Donald Malcolm's Planetary Exploration Team series. Despite this fact, he presents an extremely fascinating plot—of a doughnut-shaped sun with a hole in the middle! Naturally, it is the hole which causes the excitement . . .

beyond the reach of storms

by donald malcolm

Out at the edge of the Milky Way, where stars are lonely beachcombers on the shore of an unimaginable sea of space stretching two million light years to the next island of light, they found the strange sun.

After Team 31 had landed into a dilemma with three horns on Palmyra, Captain Krishna Rang, commanding the Survey Ship *Starfire*, recalled all six Planetary Exploration Teams to Meroe for a rest, before completing their part of the survey, and returning to Earth.

Of the sixteen men who had been afflicted with syringomyelia, two had died, while the others, including Doc Whitehead, Kurt Lemnitz and Harry Gardner, had recovered under intensive treatment.

The personnel of the teams had spent a lazy three months on the gentle world, renewing old friendships and making new ones. Matt Brady, Senior Team Leader of P.E.T. 31, was almost persuaded by Alan Gordon and Paul Janeba to stay, but he elected to go with the *Starfire*, promising to return.

Rang had called in the six Team Leaders for a series of conferences with the *Starfire's* scientific advisers, and the exchange of ideas, discoveries and inventions began. As agreed, when the survey master-plan had been formulated on Earth, each mother ship—there were twenty in all, carrying a total of one hundred and twenty Preliminary Survey Teams and the same number of P.E.Ts.—would complete its allotted part by making a general sweep, in whatever sector of the Galaxy it happened to be. The *Starfire's* segment lay along the spiral arm which had given birth to the Sun, aeons before.

That is how they came upon the star.

It was evident, even from a long way out, that the star was different from the average, because of the shape as seen in the telescopes: long, like a sausage. Measurements gave the length as a million miles, by some two hundred and fifty thousand miles thick. There were no planets, in itself not too unusual.

The Astronomical Staffs of the teams took it in turns to provide observers as the *Starfire* made a leisurely approach, while the lay personnel almost came to blows over the use of what was popularly termed the "tourist" telescope in the observation dome. They were treating this as a trip round the bay.

The first of many surprises wasn't long in coming. Sherman Bond, a close-mouthed Canadian on the staff of Team 28, was sharing the wee small hours observational watch with Ronnie Coleman of Team 31. Coleman, who had been running a spectroscopic analysis of the star's light, and was presently engaged in writing up data for the computer programmer, dropped his pencil on the desk and viewed Bond's hunched back as he used the 10-inch reflector.

"Has it winked at you, yet?" Coleman asked, seeking any way to prod his companion into talking. The Canadian treated words like precious stones.

"Come and take a look at this." This comparatively long speech and the way it was uttered brought Coleman to the Canadian's side.

Bond moved away and gestured to the eye-piece. Coleman looked, then glanced up, his voice coming out in a squeak, "A doughring?" He bent for a second view.

The ship was passing below and to one side of the star and he could see the huge ring of light, a glowing topaz yellow against the vivid black of space.

"I suppose it *is* possible—" he began, straightening up slowly and leaning on the telescope.

"Suppose, nothing," Bond retorted sharply. "It's there, isn't it?"

Coleman paid no attention to the outburst of logic. "I wonder if anyone else has seen it?"

"It's 0200."

Coleman returned to his desk and sat on the edge. "I see your point. I think we'd better inform Captain Rang and the O.O.D." He reached for the communicator button.

Bond stretched and advised, "Tell the O.O.D. He's officially in charge of the ship during his watch. Let him decide whether or not to tell the Captain."

"Watch you don't wear out your vocabulary!" Coleman quipped and ducked expertly under a half-hearted swipe at his ear. "You're right, though," he admitted, thumbing the button and speaking to the bridge. The Officer on Duty was Lieutenant Jim "Tote" King, who, by virtue of his predilection to betting of any description, was a famous, or notorious, figure, depending upon one's degree of success or failure.

"Have you peeked through the chintz curtains recently?" Coleman asked innocently. Bond listened drowsily, his expression bored, and he resumed his observations as King's attractive Australian drawl came through clearly, "You know we're on radar watch in this modern world. Or hadn't you heard? Anyway, I gave up staring out of the window years ago. What's there to see?"

"You're such a romantic guy," Coleman responded sweetly, savouring his revenge for large portions of his pay, disappeared for ever into the Lieutenant's copious coffers.

"Get on with it," Bond urged him disapprovingly.

"There's plenty out there," Coleman led King on.

"Yees, I know—a beautiful piece of 38-24-36, wearing nothing but a smile and a space helmet," the officer scoffed, chuckling. "Why not go back to your star-gazing, Ronnie, and leave the hard-working Navy alone?"

"Would you like to bet?" The remark slid in with the smoothness of oil.

Coleman could visualise King pointing like a gun dog as he scented some easy money. "Okay, sport," he replied, the chuckle still evident in his voice. "What's the bet?"

"That star out there has a hole in the middle: two hundred and fifty credits."

"Done! You must want to lead a life of poverty."

"Have a look through your scanner scope. The aperture's sufficient."

There was a momentary silence, followed by a muffled curse, followed by a mutilated croak of: "You two-timing—! Why the hell didn't you tell me?" He sounded like a kangaroo that had suddenly discovered it had forgotten how to jump.

"But I *did* tell you, Jim. Two hundred and fifty, remember."

He closed the channel and made a great pretence of shying away from a glance that would have stripped paint off the bulkhead.

"Don't worry, Sher," he grinned, "I wouldn't dream of taking his money under such circumstances, but he doesn't know that and I'm not going to tell him for a wee while. Maybe this'll teach him a lesson."

Bond, all set to castigate him with a few biting words, relapsed into taciturnity.

Coleman said, grinning happily, "Jim will be in such a panic, the Old Man'll think every rivet in the ship has popped at the same time!" The thought amused him vastly, even though the ship didn't have any rivets.

He wiped away a tear of laughter from his cheek and went on seriously to the Canadian, "They'll call that star after you, Sher. Just think: "Bond's Star." You'll be famous, the same as Wolf and Barnard and the rest."

Bond shook his head wonderingly. "Are you studying for an L.Lb?"

"L—?"

"Licentiate of the Looney Bin."

Coleman was angry. "You don't care, do you?" He perched on the edge of the desk. "Astronomical immortality is yours and you make jokes." Coleman was at a loss.

"You could be right," Bond replied, with frustrating vagueness.

What would have been an uncomfortable silence was forestalled by the entry of Captain Rang, accompanied by Kurt Lemnitz and Dave Hird, the respective Heads of the

Astronomical Staffs of Teams 31 and 28, with King bringing up the rear and spearing Coleman with venomous stares. Coleman made rustling gestures with his fingers, and leered.

"Good morning, gentlemen," Rang said, smiling faintly at his own exactitude. He drew on his cigar. "Lieutenant King tells me—in a somewhat disgruntled manner—that the star has a hole in the middle."

Coleman gave Bond a hefty prod and the Canadian answered, "It's true, sir. I was making routine observations when I made the discovery."

"Very interesting indeed, Dr. Bond. May I see it, please?"

"Certainly, Captain." Bond adjusted the telescope as Rang asked Coleman, "Is there anything else peculiar about it, Dr. Coleman?"

"Not that's been noticed so far, sir." Coleman lifted some notes. "It's spectral class G-7, with a diameter of about a million miles. I'd hazard a guess and say that the hole is at least half a million miles in diameter. Accurate figures will be available once methodical observations are started."

"Thank you." Rang turned to Dave Hird. "Will you arrange the programme of observations, please?"

Hird nodded as Bond said, "Ready now, Captain."

Rang, his cigar clamped at one corner of his mouth, Lemnitz and Hird gathered at the eyepiece and took turns at observing the strange star. King took the opportunity to drag Coleman into a corner. "What kind of a bet was that?" he demanded, in low, fierce tones. "You made a bloody fool of me!"

"It was a perfectly straight bet. You made a fool of yourself. And you were quick enough to take me up on it," Ronnie answered, managing to keep the right note of seriousness in his voice.

They became aware that a third party was listening in, as cigar smoke drifted between them.

Both men turned as Captain Rang, cigar poised like a sawn-off conductor's baton, asked politely, "How much was the bet, gentlemen?"

"Er—um—two hundred and fifty credits, sir." Coleman told him, his face flushed, "but I didn't mean to take it. I just wanted to teach "Tote"—I mean Lieutenant King—a lesson." He swallowed hard.

The Australian's expression was a mixture of relief and chagrin.

Rang drew thoughtfully on his cigar and said, "I think he's learned his lesson, don't you?" His dark, handsome, eyes were twinkling as he moved away.

Coleman and King grinned at each other, then shook hands.

The duty steward knocked and entered the observatory with coffee, and poured it briskly.

After the six men had taken a few sips of their drinks, Captain Rang asked Hird, "If you hadn't been presented with the direct evidence, would you have believed in the existence of such a star?"

Hird, small and stoop-shouldered, looked like one of the three witches as he hunched over his mug. "Yes, Captain, I would. Many stellar models have been constructed, based on sound mathematical reasoning, and while some of the models are bizarre, it's possible that most, if not all, of them do exist somewhere." He blew on the steaming surface of the liquid. "After all, there are plenty of galaxies, each with some hundred thousand million stars in it."

Kurt Lemnitz said, "I think you'll agree on one thing, Dave: that star out there can't be stable in its present form."

Hird nodded at his colleague, who, after his bout of syringomeylia, was still pale and shrunken. "You're probably right, Kurt, although the computers have the last word, as always."

Ronnie Coleman asked, "What can we infer from that, Dr. Hird? From its spectral type, it seems reasonable to assume that it is about the same age as the Sun."

"What is the latest figure, Ronnie?"

"About six thousand million years," Coleman answered King, then went on, "if, as we seem to agree, it can't be stable, what has been happening all this time?"

Hird's narrow shoulders jerked in a sketchy shrug. "Quite honestly, I don't know. I've a feeling that star has a few surprises in store for us, yet."

Captain Rang, selecting another cigar, said, "I suggest we terminate this session, gentlemen, and continue it at 10.00 hours in the conference room. By that time, the ship will be in a stable orbit round the star and the programme can be discussed. I shall want the complete Astronomical Staffs in attendance, Lieutenant King, as well as Drs. Manson and Drake."

"Very good, sir," King acknowledged, saluting.

When the Captain and the senior astronomers had left, Jim King helped himself to another mug of coffee and started to drink it quickly. "You've certainly sunk me without trace, Ronnie," he said, without rancour, between gulps. "I'll never be able to take another bet on this ship."

"Would you like to bet on it?" Coleman asked slyly, smiling at King's mournful expression. He added, "Don't you believe it, Jim. The suckers will flock to you in their hundreds, all hoping to emulate me! I'll want a percentage, of course."

"Of course," King mocked, bowing elaborately. "I shall owe my future success all to you." He finished his drink and returned to the bridge, his head full of new schemes for making money.

By 05.00, the *Starfire* was in her computed orbit, with a mean radius of thirty million miles. A cometary type orbit had been considered, but discarded. The selected orbit, perpendicular to the plane of the rotation of the star, allowed plenty of time for detailed observations to be made.

The programme started at 17.00 and it wasn't long before two of the surprises predicted by Dave Hird turned up.

The first was the discovery of an intense magnetic field, not surrounding the star, but actually in the hole. This discovery was set aside for further study. It was the second discovery that set the astronomers wondering what was out there.

A profusion of stars had gradually become visible through what was now being capitalised as The Hole.

The star rotated in the plane of the Galaxy, so that the stars above and below it were very few in number and widely scattered, not nearly as many as were visible through The Hole.

Captain Rang called in the Heads of the six Astronomical Staffs to an informal discussion in his quarters. Blown-up photographs were passed round. The field of stars could be clearly seen.

"Events have been moving so quickly, gentlemen," the Captain began, lighting a cigar, "that I thought a discussion at this stage would be valuable. You are free to speak your minds. Dr. Hird, would you state the position as it is at present, please?"

Hird hunched in his seat, looking like a thinned-down version of some video actor trying to think himself into the part of the Hunchback. "The star is unlike any other so far discovered," he said in a voice with a rusty quality to it. "It has, as you know, a hole in the middle, and, as Kurt has pointed out, such a star probably isn't stable. One of Kurt's assistants, Ronnie Coleman, raised the interesting question that, if we assume—as I think we can—the star to be of the same age-order as the Sun, what has been happening to it for the past few thousand million years. That is a question we may never answer. We can only continue the programme of observations and deduce what we can from the data." He moved in his chair, as if easing a vague pain.

"The next discovery was the presence of an intense magnetic field, of strength some 175,000 Gauss." This brought murmurs of surprise. "The material in the ring is highly ionised and the star is rotating very quickly, the period being thirteen hours, ten minutes and fifteen hours, as computed from available data."

Ray Dainty, the moody, chain-smoking Head of Team 29's A.S., stopped puffing long enough to mutter, "Helmholtz coil, stellar model!"

"Exactly, Ray." Hird acknowledged dryly, his dislike showing. He was a trifle miffed at having his exposition interrupted and the punch line stolen. "The negative electrons are rotating in one direction, while the positive protons are rotating in the other, the general effect contributing to the build-up of the intense field. The lines of force concentrate at the centre of The Hole, then coil about the ring."

Blowing delicate smoke rings, Captain Rang said, "It reminds me of the 'magnetic bottle' physicists set out to create around the mid-Twentieth Century. I think the largest artificial field they managed to create at that time was about 50,000 Gauss over a distance of an inch or so."

No one could contradict the Captain's comments. He was a foremost authority on the history of science.

"That's something I never knew, Captain," Hird admitted, with genuine admiration.

"Excuse my interruption, Dr. Hird," Rang begged, very politely, "please carry on with your statement."

"The third, and possibly most puzzling, discovery concerns what you have all seen in the photographs: a field of stars,

which do not belong to the Galaxy, visible through The Hole in the star."

"Is there anything unusual about these stars?"

Hird glanced at the questioner, Sam Slater, the Negro Head of Team 30's A.S., and potentially the most brilliant astronomer aboard the ship.

"Not that anyone's noticed so far, Sam," he answered slowly, "they form a random selection that could be found anywhere in our Galaxy. Not, I might add, that any radical difference is to be expected; matter is matter, anywhere in the Universe."

"Have you any idea what's causing the effect, Dave?" Eugene Smirnov, of Team 32, asked, adjusting his rimless glasses, his sole personal affectation amid a stern Russian exterior. He felt they helped to soften his rather chiselled features.

Hird pondered that one. "I was inclined to answer that the intense magnetic field had caused a distortion of space, allowing us to see part of another galaxy. But I'm not happy about that notion." He drew his shoulders forward and chewed on a knuckle. "It's apparent from the photographs that there is absolutely no detectable distortion of the light from these stars, which one would expect in the presence of such a field."

"I wouldn't be too quick about rejecting your own idea," said the hitherto silent Team 27 Head, Ferenc Sandor, a pulsatingly handsome Hungarian. "Could it not mean that the stars are so far off, with the result that the emissions are so weak by the time they reach The Hole and there is no detectable distortion? After all, "he went on in his musical voice, "the stars don't necessarily have to belong to the galaxy nearest us. We could be seeing to the very edge of the Universe itself."

Hird started to reply when Lemnitz said, very quietly, "Has it occurred to anyone that the area enclosed by the ring of matter of our star might not belong to *our* space, but to the space of the other galaxy?"

No one spoke. At length, Sam Salter commented wonderfully, "That's quite a thought," and reverted to silence. Lemnitz's question seemed to have deprived them of further speech, and Captain Rang, who had been thinking that another cigar might help him to keep on top of what might

have been an obtuse wrangle, remarked, "Perhaps Drs. Manson and Drake might be able to answer that one." He looked round the company. "Has anyone any other ideas, suggestions to offer?"

Ray Dainty, lighting a new cigarette off the stub of the old one, said, "I wonder what would happen if we shot a missile through The Hole?" He left the notion dangling and contemplated the glowing end of his cigarette.

"There's no reason why we shouldn't try it," Captain Rang endorsed. "Gentlemen, any objections to raise?" There was a collective shaking of heads. "Good, I'll arrange it at once. It shouldn't take long for the computer to give us an orbit for the missile."

At 21.00, all was ready. The news had been relayed to all personnel aboard. A cine-camera, attached to the 20-inch reflector, was hooked into a close-circuit television system and everyone was able to see the proceedings. Visual watch was maintained on the 10-inch.

Lieutenant King was running about like a demented dingo, taking bets on the fate of the missile.

At 21.09, the missile lurched away from the firing bay, its engines were activated and it streaked towards the strange sun. It winked briefly into hyperspace and out again, materialising, according to radar checks, within fifty thousand miles of its target. It travelled the distance in just over an hour.

No one was sure what happened next. The centre of The Hole brightened for perhaps fifteen seconds and the observers had the distinct sensation of being drawn into the heart of a vortex. Then, suddenly, a huge shape blotted out the stars in the field and, as the shape diminished, they could see it was that of the missile. Within thirty seconds, the terrifying monster was gone from sight.

"Good Christ in Heaven!" Ray Dainty exclaimed without blasphemy, "someone's going to get a fright when they find that thing running around loose!"

"There's no warhead on it, Ray," Salter reminded him.

"I know that!" Dainty was shaking so much that he dropped his cigarette. He stamped his heel upon it. "We don't know what manner of creatures live beyond The Hole — "

Ronnie Coleman grinned, trying to jolt him out of his mood, and joked, "Never mind, Ray, when the Stores Comptroller is stumped for some way of explaining the use of the missile, he'll stop the cost out of your pay."

The look Dainty gave him was savage and he regretted the quip. Before he had time to apologise, Dainty stalked out, groping for the inevitable cigarette. Sam Salter rolled his eyes at Ronnie and made circular motions with his forefinger against his head.

There was another meeting at 23.00, this time in the conference room. All members of the Astronomical Staffs, except those on duty, were present, as well as Manson and Drake, the ship's spacetime theorists.

The first item on the agenda was the running of the colour film taken of the missile's journey. It was shown at normal speed, then in slow motion, and it was fascinating to watch the formation and dissipation of the fantastic shapes at the centre of The Hole. Spirals, zig-zags, corkscrews, in glowing ambers, bronzes, ultra-marines, icy greens, vivid crimsons, lacy lemons and violent purples, appeared and were gone. The shape of the missile, so overpoweringly black, seemed to drain the surrounding colours, until, upon its disappearance at the two o'clock position of The Hole, everything returned to normal. Or at least, to as normal as they'd ever be.

As the lights went up, Rang, sitting at the desk, flanked on either side by the six A.S. Heads and Manson and Drake, took quick control and invited discussion.

Kurt Lemnitz spoke up and asked: "I wonder if Drs. Manson and Drake would care to comment on my earlier suggestion that the area enclosed by the star-ring might not belong to our space, but to the space of another galaxy?"

Preston Manson's gnome-like face, which resembled a crab apple with features appended, creased until his eyes had all but submerged themselves in the thin folds of skin. This, with him, was always a preliminary to speech. "Dr. Drake and I have conferred on your suggestion, Kurt," he said, leaning forward to look at Lemnitz, further along the table to his right. "Our conclusion is that you're probably right, with the provision that the centre of The Hole is likely to be in our space, providing a passage into the other space. The centre must act like some kind of focus. You all saw

how the missile was grossly magnified, before dwindling and disappearing off the edge of The Hole, as if along a line of force." He shook his head a couple of times. "It's all very unscientific, I fear, but it's the best we can do at present."

An astronomer in the audience asked, "You think, then, Dr. Manson, that the field of stars lies in another space and not in another dimension?"

"While we haven't yet considered that possibility," Manson responded, glancing at Drake, who was scribbling on a notepad, "I'd say that it is another space we're seeing. Ted?"

Drake removed his pipe from his humorous cavern of a mouth, and agreed with Manson, saying, "I can't go into the reasons here, but I think the field is spatial, not dimensional. I doubt if we're seeing stars in a parallel time-track, or anything like that."

A buzzer in front of Rang sounded and the Captain opened the channel and listened. Those near him could hear a voice saying. "Gall in the observatory, here, sir. We've just finished a comparison series of photographs taken of the star. Something very unusual has come up."

"Please bring the photographs to the conference room at once, Dr. Gall, and we'll examine them here." He closed the channel and said, "Will someone check the epidiascope, please?"

This was done by the time the tubby Gall came in, winded.

"Thank you for hurrying, Dr. Gall," Rang called. "Take a seat and let someone else operate the machine. We'll have your commentary as the photographs appear, please."

The lights dimmed as Rang and the others moved, once again, to a place suitable for viewing, and the first photograph of the star came up on the wall screen. The Hole looked big enough to swallow them.

"This was taken at 03.00," came Gall's slightly breathless comment. "The Hole measures 520,030 miles in diameter." The second photograph appeared. "03.30 and the figure is now 519,900. On the third photograph, there's been a further reduction in size, to 519,870." Quickly, he gave the details as the successive prints appeared. The lights went up as he concluded, "We've plotted a graph of the measurements taken from the thirty-one photographs recorded in fifteen hours and it is evident that The Hole is oscillating over a

period of twelve hours. Although The Hole *did* start to widen again in the time from 08.30 until 15.00, it did not return to the original diameter of 520,030. What we've called the second cycle began when the measurement was 504,003, a reduction of 16,027 miles. The diameter of the star remains the same."

"Stated briefly, Dr. Gall," Captain Rang summed up, smoke exhaling with the words, "only The Hole is oscillating, not the whole star?"

"Exactly, Captain." Gall was just beginning to recover from his exertions.

"Thank you, Dr. Gall. Please return to your duties and keep me informed of further developments." When Gall had left, Rang asked Manson and Drake for their opinions.

This time Drake acted as spokesman. "Dr. Gall's discovery seems to strengthen the hypothesis that the space actually contained in the ring of stellar material doesn't belong to our Galaxy. I'm puzzled by the oscillation only of The Hole and not of the complete star —"

"Possibly," Manson suggested, "material is 'pouring in' from the other side. And another notion has occurred to me: looking through The Hole from this side of the orbit, we see a certain field of stars. If we were to see through The Hole from the other side, I think we'd see a different group of stars."

This new idea hadn't sunk in when Dave Hird, a sly grin on his face, commented, "If it comes to that, there might not even *be* a hole when viewed from the other side!"

Confusion broke out at this, everyone talking at once and no one understanding anything. Rang demanded, and got, order. "There is a simple way to solve these questions, by sending a scout out to look and report back. I suggest we dismiss for the present and get a good night's sleep."

As the room emptied, Rang asked Hird and Lemnitz to go aboard the scout as observers. He made the necessary arrangements and the scout left *Starfire* just before 01.00.

The officer in charge expertly slid the ship into hyperspace and out again, on the opposite side of the orbit. Hird and Lemnitz prepared the camera and the telescope, while the officer took the ship in for a run close to the strange star. They snapped off a few feet of film as the scout reached the turning point of the sweep and scuttled back to the orbit.

It didn't take long to develop the film and it was clear that Manson was correct. The field of stars was nothing like the other one.

"Right," Hird said, pushing the comparison photographs aside, "let's carry out the missile experiment."

"I'm glad Ray Dainty doesn't know this is going on," Lemnitz commented, watching the crewmen manhandle the thin missile into the firing tube.

"Ray's a mixed-up nut," Hird dismissed the man callously. "He hasn't bothered to draw the line where religion ends and science begins, or vice versa, if you prefer it that way." He snorted contemptuously.

Kurt was pensive. He smoothed his middle-parted hair. "Maybe your judgments are too harsh, Dave. Since I came on this Survey, I've begun to get an inkling of man's real significance in relation to the Universe. I'm wondering if any of us have grown up. Maybe some of us, like Ray, can't keep up the pretence."

Dave Hird rounded on him, and, for all his small size, seemed to tower over Lemnitz. His expression was a mixture of savagery and gentleness. His words were vibrant. "Don't sell yourself—or the race of man—short, Kurt!" He gripped the big man's arms until Kurt squirmed. "We have in us the seeds of greatness. We can be the most powerful force the Universe has ever known. And we'll solve the riddle of *that*, too, never fear." He released his hold and clenched his hands together. "We may be young, brash, just starting out, as it were, but one day, one day—" He broke off and laughed. "I talk too much."

Lemnitz felt uplifted, despite himself. He grinned. "You should've been an evangelist, Dave."

"I am," Hird replied, looking up at him, "for man."

He gave the signal to launch the missile. When it was clear, it took off like an unleashed hound. It followed exactly the same procedure as the first missile, making a brief essay into hyperspace, re-appearing traversing the intervening, the normal space distance in sixty-two minutes. Again, they saw the weird brightening, the awesome magnification of the missile and its eventual disappearance, this time at the five o'clock position.

The scout headed back to mother.

There was a surprise waiting for them upon their return.

The first missile had come or been *sent* back.

The experts went over the missile exhaustively, but found nothing unusual. It was one more place in a puzzle of unknown size.

Over the next few days, as the *Starfire* followed her 78-day orbit, The Hole, now the premier topic of conversation aboard ship, steadily shrunk. The rate of shrinkage wasn't constant. Various rates of shrinkings were computed and it was estimated that The Hole would close sometime during the twelfth day of the orbit.

This information, when released, set everyone thinking deeply.

On the tenth day, when The Hole was only a hundred thousand miles in diameter, Captain Rang received a deputation of the twelve Team Leaders. Rang was slightly surprised to see Chaplains Macauley and de Ribera tagging along, like guardian angels. He hid his surprise behind a cloud of smoke.

Captain Rang greeted them politely and sat back, his dark face expressionless, as they seated themselves.

"I understand that you wanted to see me, gentlemen, on a matter of great importance—" He waited, his cigar poised.

Senior Team Leader Matthew Brady, of Team 31, rubbed his comical, potato-shaped nose and said, "I've been elected spokesman, Captain, probably in deference to my advancing years, if for no other reason." They smiled briefly. Brady went on, "As you know, Captain, this show has so far been pretty well confined to the Astronomical staffs. The rest of us have been kicking our heels on what I heard someone describe as a trip round the bay."

"You've all been having a much-needed rest," Captain Rang amended gently, "one that your men, especially, Senior Team Leader, worthily earned."

Brady coiled a forefinger round his nose. "That's just it, sir." He gestured to the other Leaders. "We feel there's still work to be done."

Rang was abruptly at the peak of his attention. Uncannily, he sensed what was coming. "Go on."

"There are stars visible through The Hole, from either side. We've discussed it, among ourselves and with the Chaplains, and we think teams should be sent through The Hole before it closes."

Rang's eyes maintained their steady scrutiny of Brady. He disposed of his cigar stub and said, "Would you care to outline the reasons behind your request, please?" He preferred to let Brady state his case fully before making a decision.

Brady glanced at Chaplain Macauley, who nodded faintly, as if in encouragement, then continued, "It seems to us that the scientific aspects of the star have been magnified to an extent where all other considerations have been ignored. No one has stopped to ask *why* the star is there and why it is acting in such a manner. We think the star has been created as a gateway to other areas of space—"

Rang frowned slightly and selected a cigar. "That implies intelligence of a very high order indeed."

Brady answered briskly, "We think that intelligence exists, Captain. Was it an accident that the missile returned? It's our duty to try and contact the intelligence by sending a small team through either side of The Hole."

"But The Hole is closing. The men would never be able to get back."

"Team 31 came back from Palmyra, sir," Brady argued, "even although it was a week late." There was no levity in his voice. He went on, "If there is an intelligence behind the strange star, there would be no purpose in arranging opportunities if the representatives of questing races couldn't re-establish contact with their own people. That is why we are convinced there is some way back."

Rang was extremely pensive. He laid his unlit cigar on the desk. He asked at length, "Is this the desire of you all?" His dark eyes swept over them, probing for signs of withdrawal. He found none. Everyone met his stare resolutely.

"I can answer for us all: yes," Brady replied, rubbing his nose.

Rang changed his tack. "Chaplains Macauley, de Ribera—what stake have you in this?"

Manuel de Ribera, his fine Spanish features filmed with sweat, answered in soft, sun-nurtured tones, "We have God's stake, Captain. This intelligence, for all that it has achieved a truly advanced technology, may not know God, and it is our wish to go through The Hole, just in case."

"Wouldn't you think," Rang countered, "that a race so advanced as to be able to create a star as a gateway to other

space would also be extremely sophisticated in religious matters?"

Macauley, Team 31's shrewd Chaplain, shook his head as if to say to Rang, "You won't get away with that one. Your question is loaded, Captain. There were many great *pagan* civilisations on Earth."

Rang allowed himself a small smile and Macauley returned it. "I must yield, it seems," the Captain conceded, "although I fear I shall regret my decision. What plan had you in mind, Senior Team Leader Brady?"

He glanced at his companions before answering. "There are fourteen of us here. We will divide into two teams of seven and each one will go through The Hole, using unarmed scout ships."

"Unarmed? Is that sensible?"

Macauley, as he replied, sounded very patient, but Rang knew the Chaplain of old, and took no offence. "We must give evidence of our civilised status, Captain. Our hands must be empty. We must take the chance now. It might not come again, for a thousand years, a thousand ages, perhaps never."

The ensuing silence threatened to prolong itself when Rang's communicator bleeped. He opened the channel. "Bridge here, sir. The second missile is lying off the starboard bow."

"Have her brought aboard, please. Thank you, Bridge." Closing the channel, he said, "You heard the report from the Bridge. It confirms, in my mind, the existence of purpose, of intelligence. You have my permission to go ahead with your preparations. When do you expect to be ready to leave, Team Leader?"

Brady checked the time. "It's 11.30 now. I'd say about 16.00 hours."

The hours died a quick death as the scouts were prepared.

At this time, Brady felt very keenly the absence of his friend Doc Whitehead. Doc had wanted to make this final voyage, but his health had decreed otherwise. The disease had taken away the substance and left only the shadow. So, while Doc stayed behind on Meroe, he was about to undertake the greatest, perhaps the last, adventure of his life, a life that had been hard, although the good things outweighed the bad. There was no guarantee that they would return

from the other side of The Hole; only a feeling that, as a race, man might be approaching the most significant cross-roads in his long and tempestuous history. He was afraid, more than he'd ever been before. But with the fear came a strengthening of determination, a spring tide of courage. He prayed.

They met at the launching lock, each covertly seeking in the others a hint of weakness, of unbuttressed fear, and finding none, being the more resolved for it.

Rang, alone, carrying the terrible burden of decision, shook hands with each man. Not a word passed between any of them. It was not a time for words. The handshakes conveyed his feelings.

They gathered in a group round Chaplain Macauley, who said into the silence, "We ask the blessing of Almighty God on our undertaking, a journey beyond the reach of storms, of human ken, but always within the bounds of His encompassing love. Amen."

At 16.10, both ships were gone. Observers saw the weird twisting as one of the scouts passed through The Hole, followed by the magnification, the dwindling and the disappearance. The personnel of the *Starfire* settled down to wait.

The men aboard Brady's scout experienced nothing unusual as they passed through The Hole. The ports of the ship were cleared and they sought eagerly their first glimpse of this other space. Slowly, they drew back, like seven puppets controlled by the same strings, and stood staring at each other, pale and wordless.

Outside the ship, no matter where they looked, there were no stars. The heavens, on every quarter, were totally devoid of light.

"What in God's name does it mean?" Len Kitten, of Team 32, asked Brady, catching him by the arms. "What have you led us into?" His voice was rising into a shriek, but quietened just as suddenly. He shivered uncontrollably and turned away from Brady, his questions forgotten. "I—feel cold," he murmured, half-crooning the words to himself, "in my soul." He sank down in a corner as Macauley went to him. The Chaplain said very softly, "Can you explain the feeling, Len?" Kitten's head kept jerking spasmodically and his speech was slurred and fading.

"I . . . feel as if my whole being has been . . . stripped . . . and exposed to all the evil in the Universe." His shoulders began to shake and tears rolled down his cheeks and splashed minutely on the deck. Macauley looked appealingly at the ring of mute faces, finding no help. He started to pray, then realised in constricting terror that his effort was vain, that he couldn't attain the correct attitude. His numbing mind, blackly encircled, resisted all attempts at prayer. Silently, he squatted beside Kitten and slid an arm round the man's shoulder.

The others stood, strangely bereft of speech, exchanging stares that had in them the first glimmerings of black helplessness.

The ship sped on through the darkness and no one was aware of mounting acceleration. The feeling that had begun with Kitten and spread to Macauley, quickly engulfed the others. Each sat, cut off from his fellows, a focal point of evil.

Brady's mind was a maelstrom of evil desires, thoughts and intents. All the bad things he had ever done in his life crowded in upon him, each event fighting for premier place. His mind was like a hole, oozing with thick, suffocating mud, which threatened to submerge his consciousness. Somewhere, in an unknowable part of his mind, something struggled to expand and almost succeeded, only to be smashed ruthlessly. He could see, quite plainly, his companions, but they were unreachable, enmeshed, as he was, in a web of absolute evil.

It was with horror that he became aware of thoughts and images that were not his own. He found himself staring at Macauley. The Chaplain's face was contorted, as if in internal pain. Brady's mind at first shrank from the tenuous thoughts bubbling in Macauley's mind and spilling into his own. The interchange built up, spread, until the minds of the seven men were as one. They had reached the nadir of existence.

All sense of time and of life deserted the men as the tiny ship arrowed headlong through the enveloping darkness, until at last they knew, somehow, that motion had ceased. Brady pulled himself to a port.

Something demoniacal swelled and glowed within him as he gazed out on the face of the planet. The all-pervading colour was a deep smoky crimson. The ground immediately surrounding the ship was flat and rocky; a few hundred

yards off, on the port side, lay what appeared to be the edge of a gully, with pale, roseate steam or smoke eddying lazily from the fissure. Behind the gully rose a forest of gnarled, leafless trees, like fingers grasping for paper money floating in a breeze. Farther off, black, red-tipped mountains, with a curious bright haze behind them, formed a jagged barrier to either limit of his vision. The hellish eye of a star glared down on the tortured landscape. There was no noise that he could detect, only an air of menace.

He sank down from the port, quivering like a newly-impaled shaft. His mind was rigid with fear and refused to form coherent thoughts. His companions lay around on the deck, in various attitudes, wrapped up in their own tight worlds.

A slight scraping noise, like a wind-blown leaf, caught his attention. He forced his head round in the direction of the noise.

Both airlock doors stood wide open.

The second scout, under the command of Senior P.S.T. Leader Colin Mackenzie, passed through The Hole without incident, and broke into the other space. The ports of the ship were cleared and immediately the men staggered away, knuckling their eyes, seeking to escape from the blinding light entering the cabin.

Gropingly, the covers were replaced. When they had recovered, about fifteen minutes later, Mackenzie placed a filter over a port and cautiously took a second look. The ship seemed to be travelling through a homogeneous, brilliant space, devoid of stars, planets, galaxies or anything else. He risked moving the filter slightly and gazed out. The light didn't seem quite so bright, now, but his eyes began to smart after five minutes, and he replaced the filter.

Dunne, P.E.T. 29 Leader, asked, "What can you see, Colin?"

"Not a thing, except a uniform area of light, stretching everywhere. Take a look for yourself, if you want, but don't stay more than three minutes."

It was then that de Ribera began to mutter to himself in his native Spanish. "He's making a lot of references to God and to the infinite light," Mackenzie explained, in answer to a question. "That's as far as my Spanish goes."

They stared at de Ribera's face, which had assumed an expression of such devotion and reverence, as to be almost frightening. His eyes seemed to be fixed on something beyond the ship. As they watched, he went down on his knees, his palms spread upwards, his face uplifted. Mackenzie fanned his hand before the Chaplain's rapt face and got no response.

Sean O'Connor, P.S.T. 32's fiery Leader, who had been watching de Ribera very closely, suddenly went to his side and slid to his knees. "Teach me!" he insisted, "teach me!" The Chaplain's hand sought his and held it. He spoke no words. O'Connor's tall, heavy body jerked once, all over, then he passed under the same spell that held de Ribera.

Despite themselves, the other men were drawn into the trance and soon the seven knelt in a ring, holding hands, while their minds meshed in a purity and a goodness so absolute that it threatened to destroy them. Here, concentrated in a speeding sliver of metal, was the quintessence of what man had always sought and never attained.

On, on, the little ship surged, while, for the men aboard, time and space ceased to exist.

At last, the scout came to rest. Mackenzie was the first to become aware of this. Crawling to a port, he looked out. The ship was on the most beautiful world he had ever seen.

It had come down on field of flowers whose colours might have been scooped from the hearts of the stars themselves. The field was like a palette, covered with soft saffron yellow, strange amber-gold, salmon, honey-streaked pink, deep cerise flared with silver, bright, glowing black and dull bronze. The flowers crowded in a vast sweep to the edge of a valley that he could sense rather than see. To the left stood a copse of springy trees with leaves like feathers, while to the right, rolled serene hills, soft with greens and browns, wreathed in a shifting, luminescent, haze. A yellow star shone in a clear, summer-blue, sky.

While he was gazing enraptured by the tranquil beauty of the vista, he heard a sound. He turned. Both air-lock doors stood wide open.

If anyone had asked Brady why he walked out through the airlock, he wouldn't have been able to give a rational answer. Despite himself, he was impelled to go. The others

followed him, without question, into a world utterly hostile. Once outside the shelter of the ship, they found the air surprisingly cold and clammy. Wisps of mist plucked at their faces. For minutes, they moved aimlessly, the intermeshing of their thoughts mercifully beginning to fade. But the overpowering sense of evil still prevailed, potent and tangible. Brady stared at the light beyond the mountains. Wordlessly, he began to walk in that direction.

They found the way easier than it appeared. The gully, although deep, proved no obstacle, as it closed a hundred yards off to their right. Pushing through the dead forest, which was about a mile deep, they emerged once again into open, rocky ground. They trudged on, each a prisoner of his own dark turmoil, pulled by a force they didn't understand. The passage of time meant nothing to them and the mountains seemed no nearer than they had at the beginning of the terrible journey. Then, almost abruptly, they came to the foot of the bleak, towering crags. The sides were so sheer that climbing the smooth, cold rocks was impossible. The men were driven to find a way through the mountains and this they did, discovering a narrow, gradually-rising, defile.

Fatigue, weariness, hunger: these things didn't affect them. The way lay ahead. They had to take it. As they ascended, the burning crimson of the skies gave way before a steadily-encroaching glow which seemed to concentrate the higher they climbed. At last they reached the top.

Before them, in a small plateau, stood the source of light: a shimmering building, with mistily-defined outlines, perhaps fifty feet long and twenty feet high.

Without hesitation, they walked towards it.

Mackenzie moved cautiously to the open airlock. He inhaled air sweet and fresh. A tiny brown and yellow-grey bird alighted briefly on the edge of the lock, cocked a bright eye at him, then flew away. Mackenzie couldn't understand his motives, but he left the ship. Without looking, he knew that his companions had followed him. The sensual beauty of tree and flower, air and sun, valley and hill, flowed over and around them, until they felt almost suffocated with the surfeit of it. Their minds had ceased to communicate, but the individual sense of absolute purity remained, weighing on them like unwanted riches.

Mackenzie's drenched eyes caught the beckoning, luminescent light behind the serene hills. Whatever it was they had to find, lay there and they had to go to it. They set off, swishing through the perfumed flowers, which seemed to tinkle with their passage, and went down into the valley. The descent to the shining river at the bottom of the valley was a long one. Flights of the little birds swooped and soared in the dancing air. Far off along the valley, they could see herds of grazing animals. They forded the sparkling waters at a suitable place and began the upward trek towards the distant light.

They moved on as if provided with a limitless source of energy, stopping neither for food nor rest. No speech passed between them. They were like seven enemies, banded together, temporarily, for common cause. The hills seemed to rise endlessly. Only the increasing concentration of the light indicated that progress was being made.

The hills levelled out abruptly, sloping away from either side of a small plateau. And there was the light, emanating from a building, perhaps fifty feet long and twenty feet high. The outlines gave the impression of being fixed in more than three dimensions, causing a wavering effect, oddly soothing to the eye. There was no debate as to what action should be taken. They walked towards the building.

Both groups came to a point where they apparently entered some kind of field, for they suddenly found themselves inside the building, face to face. Until that moment, neither group had given a thought to the other since the ships had passed through The Hole. At that instant, they realised that their minds were once again free of outside influence. The men mingled, asking eager questions, and finding the answers very confusing. No one could remember clearly what had happened.

Brady suggested that they explore the rest of the building. The room they were in was cylindrical, about twenty feet in diameter. An intense light shone from the ceiling. The walls, and the single door, were made of lustrous, faintly yellow, substance, which no one could identify. The door had a plate, about the size of an adult palm, four feet from the floor, on the right side.

"Shall I press it?" Brady asked the group at large. He was standing by the door.

"Press it, Matt," Macauley counselled. "It's there for a purpose and we have to see what's behind it."

Brady laid his palm on the plate.

The door didn't open, or slide: it simply ceased to exist. They were totally unprepared for what was revealed.

There, side by side, stood two display cases, twelve feet long by six high. One contained an exact representation of the world Brady's group had come through, while the other showed the idyllic landscape traversed by Mackenzie.

Someone said dully, "It's as if it were an elaborate stage set —"

"Yes," Brady commented grimly, "but just think of the scale."

Behind them, the cylinder forming the room began to brighten, the colours rippling with breath-taking speed and beauty up and down the spectrum, until the movement stopped and the column became a vibrant amber.

"Greetings, men of Earth." The voice, dry, with a hint of humour, came from the scintillating column.

Somehow, Brady found the courage to speak. "Who are you?" he challenged. "Why have you brought us here and subjected us to all this?"

"All in good time," the voice replied soothingly. "Are you always this impatient?" The chiding was that of a father for a small child.

Then: "Perhaps that is only natural in a race so young and immature."

There was a silence, as if of reflection. The voice spoke again, seeming to come from all around them. "In all the ages that the gateway has existed, only three other races have found it and explored it. The last came a million years ago, by your reckoning. You are the fourth.

"You are wondering why there is a gateway at all, and why it has two entrances. Firstly, the gateway: it is one of twenty, created at selected points in this galaxy of stars. You will note that the chances of finding one are five thousand million to one. However, my race is used to thinking in a time scale of millions of years. We have been the caretakers, shall we say, of the Universe for thirty million years. One of our tasks is to search, continuously, for races sufficiently advanced to qualify them for training for subordinate positions, such as Guardianship of a galaxy."

The men exchanged awed glances, but didn't interrupt. Their minds were partially numbed by the immensity of the events the voice was telling them about.

The voice continued, "The stars were not put in obvious places, where any average race with interstellar travel would find them comparatively easily. They were put where races with that blend of initiative and the spirit of adventure would find them, because, subconsciously, they were forever seeking something new, something strange.

"But finding them isn't enough. We come to the reason for the two entrances. To be a servant of the Creator—for that is the function of the Guardians—a race must have humility and deep faith. Its members must be a mixture of good and evil, lest they suffer because of the lack of this essential balance. Our little test is meant to appraise mental resilience to absolute goodness, or absolute evil. You passed that test and your race can now begin its apprenticeship."

Brady said boldly, "May I ask a question?"

"Please do so."

"What if our race does not want to become apprentice Guardians?"

There was a hint of gentle laughter in the reply. "A race such as yours must be forever seeking onwards and outwards, to attempt to satisfy an insatiable hunger. This is known, from your actions and your thoughts. I leave you to answer your own question."

The weaving light of the column played upon their faces. Of course they would take the job. Who could refuse? To do so would be to abdicate any claim to intelligence, to relinquish a once-only offer of the chance to mould the history of the Universe.

The voice said, "One of your ships is outside. Aboard, is a box. Under no circumstances, attempt to open it. To do so will destroy your one link with us and your promise of knowledge beyond your wildest imaginings.

"However—a word of warning: you will have to work, and work very hard, for your knowledge. The box, while it contains the sum total of knowledge that we possess, will not reveal an answer simply for the asking. Only if the right questions are asked, will the box give an answer, and then only if it decides that the question is directly relevant. New

knowledge will automatically be added as it becomes available."

There was a merry chuckle in the air, that seemed to emanate from everywhere at once.

"You will have many setbacks until you learn the correct technique of phrasing questions."

"How do we operate the box?" Mackenzie asked.

"That is your first test. If you have failed to solve the problem within a certain period—unspecified—the box will become inoperative."

"They don't believe in making it easy, do they?" someone muttered.

"Nothing worth attaining," the voice chided, "is easily won. It is time to go, now. Goodbye, men of Earth, and good luck. May the Creator guide you."

The light in the column dimmed and disappeared. Then the building around them faded away, leaving them standing by one of the scouts. The view in every direction was obscured by agitated mists.

They boarded the ship, and found the box, made of the strange lustrous yellow substance. The ship rose into the mists and they slipped into unconsciousness.

How long this state lasted no one knew. They awakened slowly. Through the ports they could see space, the myriad suns of the Milky Way—and the *Starfire*.

Just about everyone aboard the mother ship seemed to be there to meet them when they left the scout in the lock. There was cheering as Brady, small and jaunty, carrying the yellow box, led the men to the deck. Captain Rang rushed forward, with the look of a man reprieved from death. There was much hand-shaking and back-slapping until Rang finally managed to extricate them and escort them to his quarters.

"We had given you up for lost," he said, his words subdued, "how did you get back?"

He stopped, noticing the puzzled looks he was getting. "The Hole closed twelve hours ago," he said faintly. "Didn't you know?"

Brady shook his head slowly and rubbed his nose. "We didn't."

Bewildered, they ate the food that was brought in, taking turns at relating their experiences, leaving Brady to conclude. He did so, and said, handing over the lustrous box to Rang. "A present from the Guardians, Captain."

Rang took it carefully, surprised at its light weight, and examined it briefly. There was a single bump on what they arbitrarily decided was the top. It was shaped like half an egg. Otherwise, the box was devoid of markings, seams or indentations. Brady repeated the warning that the box was not to be tampered with.

"I suppose tests of every description come under that ban," Rang said. He placed the box in the middle of the table. "Now all we have to think of is a suitable question to ask it in order to activate it."

Brady, staring gloomily, said to the Captain, "Which came first, the hen or the egg?" He meant it simply as a way of asking where they started.

The bump on the box began to glow and a voice spoke. It was the same one they had heard in the building.

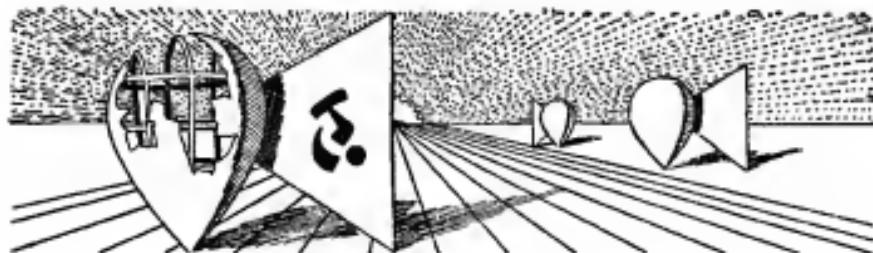
"The conundrum of the hen and the egg was first posed by—"

They sat, entranced, for two hours, listening to the box relating the history of the conundrum, which was still unsolved.

Brady said, "At least that makes them—whoever they are—seem more human."

Captain Rang smiled faintly. He spoke into his communicator. "Bridge, Captain here. Set course for home."

donald malcolm.



'Taking the increasing population to its ultimate conclusion, some new methods of public transport will have to be found to free the congested streets. Extrapolate on the existing underground railway system and you could have . . . ?

megapolitan underground

by william spencer

Violet light, pulsating at three-second intervals, was breaking over pink translucent rocks on the outermost planet. The grey sand scrunched under your space boots like hard-packed snow. But Blundell wasn't looking at the rocks or the sand. He was staring down the long barrel of a heat thrower.

The man holding the thrower had the face of a compulsive killer, and Blundell knew that one twitch of the trigger would send half his chest up in a shimmer of blue smoke.

The man was yelling something unintelligible to him through the loud hailer built into his helmet, the sound getting tangled in the thick, gelatinous atmosphere of the planet. Blundell could only stand there, frozen, his mind a whirlpool of terror, feeling the sweat prickling and trickling on his back.

When a shout came from the fanged rocks over to his right, making the man with the thrower slew round in surprise, Blundell's mind suddenly clicked back into focus. He could have seized the barrel of the thrower and disarmed his assailant—were it not that the travel-track drew him powerfully backwards away from the scene.

Blundell took out a crumpled handkerchief and dabbed the back of his neck and under his chin. He mopped his eyes. That had been a close call. Too close for comfort. He stuffed the handkerchief back in his pocket. The travel-track continued its gliding motion beneath his feet, drawing him steadily backwards.

Blundell always rode backwards on the travel-tracks. Everybody did nowadays. It was so much more restful that way: to feel oneself drawn effortlessly onwards and upwards through the tube of mild light, watching the displays on either side slipping past and receding into perspective.

Facing forwards was altogether less satisfactory. One spotted a tiny display in the distance, coming nearer and growing larger. Then, no sooner had it drawn level and one tried to get a good look at it, than the display whisked over one's shoulder and vanished.

Facing backwards, one really had a chance to get a good look, as the display slid slowly past and gradually receded into the distance.

The girl's room seemed bare of those touches of femininity which one always looked for. Pink cloud cushions? Floating frilly auroras? There weren't any. Instead just black and white. Black velvet curtains at the doorway. White fur flooring. White cloud couch. White lucent walls. Matt black ceiling.

Blundell watched the girl walk slowly towards him, looking straight into his eyes. She wore a loosely-tied knee-length jacket which swayed open at the front, revealing a pair of long shapely legs, slender but subtly curvaceous, sheathed in synthetic tights.

Blundell found himself staring, fascinated by the way the lustrous sheen, where the light caught the curves, rippled seductively along her thighs.

She was singing something—it sounded like a folk ballad with a flavour of unassuageable pathos—in an offbeat way. The girl's face was cool, distant, austere, impersonal. A serene oval which seemed a stranger to any human emotion.

But looking closely, Blundell thought he found a sort of promise, a hint of anticipation, in the girl's big dark eyes. Was it merely wishful thinking on his part?

Blundell would never know. For before the girl quite reached his outstretched arms, the moving travel-track had

bore him remorselessly backwards out of reach

Out came Blundell's handkerchief again. Dab. Dab. Why did it have to be so hellish hot in these travel-ways? The air pressure seemed to be rising again.

Blundell looked listlessly round at the other passengers in the crowded shaft through which they were all travelling. The faces of most people had a glazed look. It took a pretty potent display to shake them out of their total apathy. The blank faces seemed mindless. No one spoke to anyone else.

Blundell glanced up at the cylindrical barrel-vault of the ceiling, its curving featureless surface softly suffused with white light. It had a hypnotic, soporific effect if you looked at it too long. But there were always the displays, if you wanted distraction. And who didn't?

The displays lined the walls of the shaft at regular intervals. Each display was a complete scene, a complete world in itself. They were moving. 3-dimensional, stereophonic. Fully coloured and very vivid.

You could excuse people who were riding a really long travel-track like this one, if they gave all their attention to the displays.

The long line of lights in the ceiling came and went, illuminating the curving vault with pools of radiance. It gave one a peaceful feeling to watch the lights sailing past. But most people preferred to stare at the displays.

You got a bigger kick from the displays.

Cut off there, in the intermittently illuminated tube, the mind became bored by simply watching the blank ceiling, or the equally blank faces of the other passengers. In its boredom, the mind was grateful for anything to occupy it—anything at all. And so the displays came in useful.

It was all right provided you remembered that the displays were not real. Only the travel-way was real.

Underseas profound green gloom, suffused by the glow from countless phosphorescent plankton. Probing forward with their helmet beams, the underseas exploration team swam slowly along in formation, enclosed in their streamlined transparent bubbles, exhaling rhythmically.

Blundell leaned forward as he felt himself moving along beside a member of the team, through the shadowy corridors of dark water. Slowly, cautiously, feeling their way ahead.

They found themselves amid an immense shoal of fish, which turned and flashed silvery undersides, darting away. Thousands of tiny blips crowded their laser search screens like a snowstorm—obscuring the other, bigger signals.

The school of giant sawfish came in fast, puncturing the bubbles of the leading three explorers before any defensive reaction was possible. It would have been Blundell's turn next . . .

At one stage Blundell was developing a theory that there was a definite sequence in the displays. Was it three unpleasant followed by two pleasant followed by one unpleasant and two pleasant again—repeating? If it were, one would be able to know, approximately, what was coming next. But the theory broke down after a few sequences, and Blundell was forced to fall back on the idea that the sequence was completely random in character.

So you just had to take what was coming, letting each display flick suddenly over your shoulder into the field of vision. Grisly or gay, shocking or sentimental, you had it coming to you.

With so many people crowded into a narrow tube, the atmosphere in the travel-way shaft was more than somewhat oppressive. There wasn't much room to move. It was not surprising that there were constant irritations of one sort or another.

The man next to Blundell kept nudging him semi-accidentally with his elbow. Blundell glanced surreptitiously sideways.

It wasn't a good idea to engage anyone in conversation. That way, you opened up a relationship, you started something you couldn't stop.

You might find yourself talking, inescapably, to an obsessed lunatic. Or, almost as bad, a garrulous mindless bore. Blundell was convinced that many of the people who rode the travel-ways were, in fact, on parole. Walking cases from some psychiatric institution.

The man next to him seemed to spend most of his time looking sideways, away from Blundell. So by turning his head slightly and swivelling his eyes painfully in their sockets, Blundell was able to get a somewhat distorted, out of focus impression of the man, without seeming to be studying him too closely. The man had greying hair. Closecropped. Square head. And square heavy jaw.

Blundell felt he knew the type well. He tended to dislike specimens of it on sight. An entirely different breed of men, surely. Sort of sub-species? Definitely sub. Thickskinned. Prod you in the ribs with an umbrella as soon as look at you. Or step backwards on to your toe, and never apologise.

Oh no, they never apologised. You just had to swallow your anger, rub the toecap of your shoe on the back of your trouser leg, and forget the whole incident as quickly as possible.

Another display swung into view as the travel-track continued its slow, remorseless march upwards.

Wow, that was a risqué one, thought Blundell.

Some of the displays, nowadays, were undoubtedly rather salacious by most people's standards. Those lissom girls strolling around clad only in a few wispy puffs of CO₂ vapour. Or taking a languorous bath in a transparent tub full of flashing sapphire water. Some of the newest displays were definitely sailing close to the wind. Of course the aim was basically admirable: to take one's mind off the otherwise insane boredom of the ride.

How did one let oneself in for this sort of thing, anyway? Why did one get on these incredibly tedious and long-drawn-out ways in the first place?

It was an interesting question.

The trouble was that, in the course of the journey, one tended to forget what it was all about, and where one was going. Blundell strained his eyes towards the start of the travel-way, down there at the bottom of the tunnel. But the perspectives just stretched downwards towards an unresolvable point in the remote distance. Like a perfectly straight roadway, appearing to converge in a point on the horizon.

Blundell racked his brains. The memory of the moment when he got aboard the travel-way was beginning to fade. He tried to visualise it, tried to bring back into consciousness the echo of what he had said when he asked for a ticket. What was his destination?

Well, what *was* it?

With a kind of panic, he fumbled in his pocket for the ticket. For several agonised moments, his ticket pocket seemed empty. Frantically, his fingers combed the inside of the pocket, while through his numbed brain flashed visions of himself hauled up on a summons. After a heart-stopping

interval, his rigid, nervous fingers closed on the scrap of green plastic.

He pulled it out and peered closely at it by the intermittent glow from the ceiling. It was no use. The ticket had been badly printed by the machine, and was completely illegible.

The nightmarish thought came to him that he was on the wrong track. Panic surged up in him again, and he looked around wildly. He had to get off. He lurched sideways against the guard rail in an agony of mind.

"Steady on mate," said the heavy-jowled man. His voice carried a rather surprising note of genuine concern. "You not feeling too well?"

Blundell looked up at him shyly. "I think it must be the heat. Terribly close in here tonight."

"Well, you can't open the windows." The man guffawed loudly at his own joke, and hit Blundell on the shoulder-blade. He would surely have succeeded in knocking Blundell over, if such a thing had been possible on the densely crowded travel-way.

Blundell swallowed hard. He snatched a quick glance at the man, to see if he looked sane. Then said quietly: "Do you mind telling me where this travel-track is going?"

"Going?" roared the man. "*Going!* Good grief, mate."

"I mean, our destination?" Blundell ventured.

"Destination? That's rich." The man looked at him with an expression of increased concern. "Don't tell me you do your nut with airy-fairy stuff like that. Just ride along with it, mate, the same as we all do. Let it ride."

Blundell mumbled his thanks. He decided the safest course was to pretend he was satisfied with his answer. He nodded and looked at his shoes. Perhaps if he didn't reply to the man for a few minutes, the conversation would break off right there. Eventually they could forget the whole episode.

Later they would be able to look at each other again with blank fish eyes, and pretend that they had never spoken.

Blundell's eye fell on the girl standing on the section of track directly in front of him. He had been surreptitiously eyeing her at odd moments, admiring the shape of her ears.

But when she turned and glanced sideways at a display, he caught a glimpse of a coldly uncompromising profile. She wore a black leather jacket and looked as if she would lock him in a judo hold as soon as look at him. Blundell regrettfully dismissed from his mind any idea of speaking to her.

So there was nothing for it but to turn his attention back to the displays. The displays were always there. And it cost no particular effort to look at them.

Far from it. Brilliantly coloured, crisply sonic, they compelled and focussed the attention.

But somehow the displays, for all their stridency and seductiveness, did not seem to be working for him any more. They no longer held his interest properly.

Waves of heat flowed over his head. In the oppression of the bright tunnel, he began to feel that he was getting into the grip of illusions. Surely the girl in front of him looked several inches taller than she should be?

Blundell considered the problem dispassionately for a few moments, puzzling out its implications.

That could only mean one thing

Blundell fought desperately against the idea, refusing to admit it to his mind. But it was no use.

If the girl looked taller than him, the travel-way must have tilted and was now going *downwards*. Boring deeper and deeper into the earth.

Down, down down!

Blundell swallowed hard, twice, but his throat was desert dry. Dimensions of oblivion seized his mind, receding like shadowy Chinese cubes, one inside the other, to the final zero.

He'd heard whispers of these travel-ways, boring interminably deeper into the earth's crust. He'd not taken the rumour seriously until this moment.

After all, they had to do something with the monstrously multiplying population. People, more and more people, were choking the surface with their swarming ant-heaps. Piled up in towering termite-hills of skyscrapers, storey on storey.

So why not . . . bury them?

In the waves of heat, Blundell felt himself going icy cold. Of course. That would account for the increasing heat. And what test was there, whether the travel-way was slowly rising as he had first thought, or ?

Plunging.

The glowing ceiling swam past. In a swirling delirium, Blundell wrestled with his sense of the vertical. What was true vertical? How could one hope to tell? The only reference points were supplied by the displays . . . and it

would be only too easy for unscrupulous operators to twist them just a little out of true

From somewhere in his squirming guts, Blundell felt overwhelming panic rising in him. Coiling upwards. It reached his throat and tensed the tendons to a soundless scream. His writhing hands curved inwards like the claws of a bird of prey. To go down

There was a sudden juddering, a jerking, and Blundell had to grasp the moving handrail to prevent himself from falling over. Everyone had to do the same. Strange little noises, little curses, came from everyone's throat, making a confused burble of sound.

The travel-track had stopped. Stopped dead.

After the first responses of surprise (but a travel-way *never* stopped!) the first ripple of confused movement, a complete silence descended. Complete stillness.

Everyone strove to avoid catching another person's eye. The aim always, in these crises, was to pretend that the situation was normal. Some small technical fault. Be put right in a few moments. Meanwhile keep calm.

But Blundell felt the terrifying claustrophobia squeezing his head like the pressure of a hundred atmospheres.

Suppose it *wasn't* a small technical fault? Suppose it was deliberate? They could be boxed up. Sealed in. *Anything*.

This can't happen, thought Blundell. *It is too much. Too insane. This can't be happening to me.* But it was. It was happening, all right.

Please, thought Blundell. *Please get the way moving again. Soon. Very soon.*

He looked again at the heavy-jowled man next to him, but the man had the glassy, fish-eye stare of someone who won't be drawn.

Everyone was the same. Blundell looked round desperately this way and that.

Everyone had the look of mindless zombies. Utterly mindless. Perhaps, thought Blundell wildly, these creatures are all androids and I am the only human person left alive.

It was going to be a very long

But wait!

With almost imperceptible sliding, without a tremor, the track was moving again. Infinitely slowly at first. Then

gradually building up speed until it reached its normal slow walking pace.

Sphew! That was better. Moving!

Blundell breathed again. He felt almost joyful. That was much better.

But wasn't there something odd? A hint of something unusual in the way it moved?

Then Blundell saw.

Of course!

A simple illusion. A trick. It would fool a child. It would fool most people. But it wouldn't fool Blundell.

No it certainly wouldn't fool Blundell. *He saw!*

The displays moved. The lights moved. On belts. *But the travel-track stayed still!*

Blundell screamed. He fought insanely, he shouldered people aside, he writhed through the solid mass of bodies. Screaming.

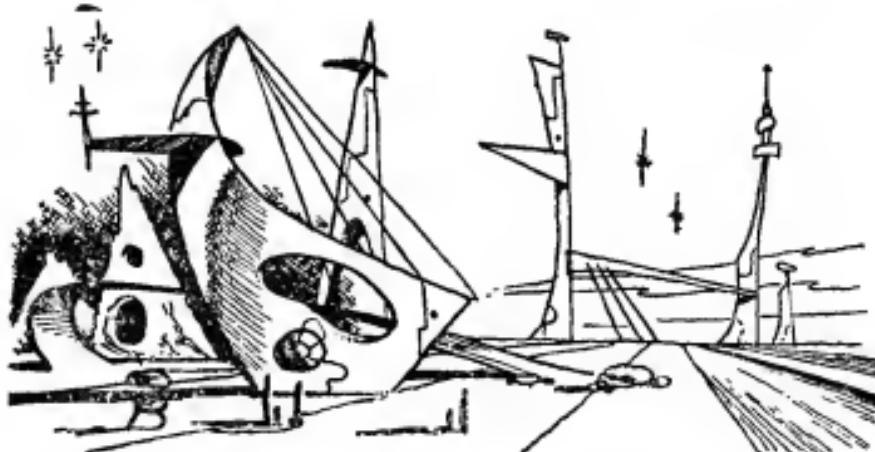
Blundell managed to get all of three yards. Then he disappeared under a pile of elbowing, kicking, shouting, cursing bodies.

The girl in the black leather jacket turned round to look. She caught the heavy-jowled man's eye.

The man noticed her and twisted his mouth in a sort of sickly smile. "Just another of those poor nut cases. You'd be surprised how many of them there are about, these days."

The girl curled her elegant nostrils. She looked the heavy-jowled man up and down, and decided he was too big to lock in a judo hold.

william spencer



Normally, at election time, it does not take a very large percentage of votes one way or the other to swing the balance in favour of a specific Party. A 28% swing would need some explaining, however.

now is the time

by steve hall

The Prime Minister of Euthanasia was disturbed. His fleshy moon of a face (which had earned him the nick-name Jovial Jack) was creased into deep furrows of worry, and his thick, dark hair was rumpled out of its customary neatness. He stared bleakly down the length and across the breadth of the long table before him at his assembled Cabinet colleagues, and spoke.

"Gentlemen, I can delay the announcement of the election date for very little longer; our mandate from the people has only a few months to go. I need hardly remind you, however, that the fortunes of our great Rabidist party are at their lowest ebb in many years."

The Premier adjusted his spectacles and lowered his gaze to a paper before him.

"The latest public opinion polls carried out by our research section show that our opponents have a clear 12% lead over us in the people's favour; the precise position is that 42% are for us, 54% for the opposition, while the remaining 4% are undecided or would vote for splinter parties." He paused for a moment, then went on, "You will all appreciate the gravity of the situation which confronts us, and what that 12% will do to our position in the Mansion."

Heads nodded gravely around the table but no-one spoke. All were content to leave the conversational ball at the P.M.'s feet until they had to take their turn at kicking it.

The heavy-featured man laid his heart bare. "Gentlemen, the future is in our hands—what do we do with it? What can we do to ensure that it will be ours? I invite your comment."

The Minister for Space Research cleared his throat.

"Prime Minister, we must appeal to the younger generation, catch their imagination—I advocate an expansion in our proposals for outer space . . ."

Across the table, his cabinet colleague for Health rumbled explosively: "Nonsense—the conquest of disease should have first priority!"

Dissenting voices spoke up in turn, the baton of argument passing to and fro between them in a verbal relay race.

"Higher pensions should be our gambit!"

"Bigger and better schools—a new deal for education!"

"Social security and full employment!"

"More houses!"

The flood gates of controversy were open.

The P.M. tapped the table with his gavel and turned to the one man who had not spoken.

"Gentlemen, our colleague from the Department of Science has said nothing, shall we invite his opinion?"

An incoherent mumble rippled around the cabinet table.

"Very well," said the Prime Minister, taking no overt objection to signify approval. "Mr. Minister, have you any comment."

The thin-faced man, whose physical appearance was the exact antithesis of the P.M.'s nodded curtly, coldly, and said in dry, precise tones: "In my opinion, it is merely a matter of mathematics as to which policies will best appeal to the electorate, and once a problem has been reduced to an exact equation, it can be solved."

"Go on," murmured the Head of Government scenting a possible solution.

"I propose that we submit all the facts to an intellect capable of analysing them and advising us on our best line of presentation."

"And where," queried the Secretary for Overseas Affairs, silkily, "do we find such an enlightened, impartial paragon of humanity?"

Heads swivelled automatically towards the Minister of Science awaiting his reply.

"No paragon of humanity *has* the ability," he said, smiling a thin, arid smile. "But we do have a giant, impartial intellect at our command at N.E.L."

To some of his listeners the initials meant nothing, and they contained their ignorance until the Minister for Space Research commented enthusiastically: "Of course! The giant computer at the National Electronics Laboratory. Why didn't I think of that?"

The Minister of Science regarded him caustically, and came within an ace of answering the rhetorical question put by a scion of the aristocracy. While he hesitated, the P.M. spoke again.

"Can the machine do it? It wasn't designed for such a purpose, was it?"

Science No. 1 nodded. "It can solve any problem provided that it is posed in the computer language; it's as simple as that."

The P.M.'s eyes travelled around the table.

"Has anyone anything further to say?"

A rubicund face representing the Bureau of Agriculture puffed an objection. "I don't like the idea of putting ourselves in the hands of a machine, I don't trust it."

"Why not?" queried Science, with rapier-like logic. "You do it when you fly, travel the oceans, go down a mine—you've got to trust machines."

"Shall we take a vote, gentlemen?" intervened the P.M. his face now a smooth full moon in all its glory. "Those in favour, please show . . ."

There were no votes against, but there was one abstention.

"What's the next move?" asked the Prime Minister.

"I will prepare a programme tonight," said Science 1, "and give it to the computer myself tomorrow—we can trust no technicians in this matter."

"What about the head of N.E.L., won't he be surprised at your using the machine?"

"Not if I have your letter saying that the matter is top secret."

"Which it is," said the P.M. "so I can give you the authority with a clear conscience."

Not very far away in the same city, the leader of the main opposition party addressed his colleagues in a less formal meeting. He lit a small, thin, carefully unostentatious cigar, puffed at its fragrance for a second or two, then pushed back the errant blond forelock so carefully trained to immediately fall back down again.

"They're on the run," he said with satisfaction. "Just like a fox with the hounds in full cry. And they can't run much farther—the end of the trail is in sight—and we're going to be there waiting for them."

The curved lock of hair flip-flopped as he turned to the man on his left.

"How are our preparations coming along, Lew? Is everything set to go once the date is announced?"

Party secretary Hemlock nodded and began to reel out information like a vocal card index.

"Local agents up and down the country are well-stocked with copies of our manifesto; candidates have been selected and briefed; rallies and meetings arranged; scripts and films have been completed for our television broadcasts, and we are holding a team of our top propagandists in readiness to tackle anything topical which comes along. The precise details of speakers for meetings and television broadcasts are as follows . . ." His voice droned on with the precision of a Swiss watch.

An hour later, the opposition group finished their drinks, patted their leader on the back for the last time, and departed for home hoping that he would remember them when he had received the Sovereign's formal request to form a government. All of them were convinced that the portals of power lay open in the immediate future ahead of them.

Precisely twenty-four hours later, the Science Minister lived up to his promise. He arrived at the Prime Minister's residence carrying a bulging brief-case. His thin frame leaned forward a little tiredly as if some physical hinge had weakened at waist level, and there were extra lines of fatigue around the eyes, but overall, there was an indefinable but unmistakable air of quiet satisfaction. Evidently he did not

consider that his labours of the day and night had been in vain.

The P.M. himself opened the front door, and ushered in the late but expected visitor.

"Come in, come in," he enthused, steering the mathematician into a sound-proof room where a cheerful log fire, wine, and cigar awaited their presence. When they were seated and the room door secured against intrusion, he continued. "What luck?"

Science 1 stretched his long legs and patted his precious burden.

"If I might coin a phrase, 'it's in the bag.'"

The P.M.'s face broke into the cartoonists' smile of Jovial Jack. "Excellent—now if I could see it in detail?"

The two men bent over the papers, the P.M. commenting from time to time: "Yes, yes . . . I'm not sure about *that* one . . . *That's* a bit daring . . ."

The logs in the grate flared their last and were relapsing into charred grey and red embers before the two men had finished their examination of the computer's verdict, then the Premier's pointed questions really began.

"You are satisfied with the reliability of this programme?"

Science 1 nodded. "All factors have been taken into account—there can be no doubting the accuracy of the findings."

"What is the prognosis of electoral swing?"

"At least 30%"

"As much as that?" The P.M. sounded delighted but incredulous.

"As the gamblers say," remarked the thin man, "we're working with a stacked deck—and the result of the game, therefore, could hardly be otherwise since we did the stacking."

"A steam-roller majority," mused his host, "I won't forget this day's work in a hurry."

The next day the Prime Minister surprised the Mansion of Representatives by announcing that the election would take place in three weeks.

The Opposition scented a rat, and cast about trying to locate it, but no dead rodent could they find. And so the battle of words began via the mediums of vision and sound broadcasts, the opening salvo being fired by a government

spokesman four days after the Premier's disclosure of the date for polling day. It was the ruling party's right to make the first presentation to the nation, and the speeches would alternate between the campaigning factions until the final appeal would be made by the main opposition speaker on the eve of the poll.

Political commentators sharpened their pencils, polished their microphones, and stood poised ready to rend the unwary from any quarter. The public in general wondered what would be said, what case would be put before them; while the Opposition in particular were ready to jeer and rip that programme to shreds.

Science No. 1 was no orator, he did not have the voice, the personality or the showmanship required for that appellation—nevertheless his precise, tightly-reasoned arguments created a tremendous impression in the minds of all who saw and listened to him—and left not the minutest chink open for the ingress of criticism.

Secret public opinion soundings conducted by both sides the next day on carefully selected cross-sections of the populace revealed the creation of a 9% swing to the government, mostly among the floating voters—the king-makers who revify or revile the rulers.

Hurried, mid-afternoon meetings took place in both party headquarters; in one there was jubilation; in the other sarcasm, recriminations, and a good deal of disquiet. "Old Napier's Bones has done well," was one acid comment, and there were many more remarks about swallows and summers—but there was a strong undercurrent of fear, too—if the Minister of Science could produce such a reaction, what might his more effective colleagues do when their turn came to speak?

The first retaliatory broadcast was bold in tone but totally ineffectual as far as the public was concerned, and the relative state of the parties remained unchanged until the government fired another broadside with more devastating results, and another 7.5% of the electorate got off the fence to the side where the grass bid fair to be much, much greener.

Two more speeches from government spokesmen punctuated by increasingly more desperate efforts on the part of the opposition speakers, brought further desertions to the ruling party's camp of 6.1% and 5.2% respectively.

Then there was a temporary lull for two evenings while tiny, minority parties sang their too extreme songs, but only their convinced and fanatical adherents thought anything of their promises.

Jovial Jack's smile widened more and more as the public's opinion swung to where he wanted it and stayed there, and he hustled around his home constituency and former marginal ones shaking hands, patting heads, kissing babies—and became known, now, as Jolly Jack, the man whose policies were right on the beam for the nation.

Cromwell, the opposition leader, toured his own neck of the woods and was made aware, by the many silences which greeted him in many places, that even he had lost a good deal of his personal following. Grim-faced, he returned to party headquarters for another round-table with his colleagues. Grave faces confronted him, faces which had lost all hope of attaining cabinet rank—many were doubtful, now, of their ability to even continue as elected representatives—not all seats were unassailable.

He spoke first to Lew Hemlock.

"How bad is the party's morale?"

Hemlock was blunt, there was no point in being otherwise. "The consistent swings to the other side have virtually demoralised nearly all of our representatives in the Mansion, while in the country, although our followers do not know the exact position, obviously they have sensed that the tide is flowing strongly against us. If we are to retrieve the position, it must be done quickly and decisively."

Next to be interrogated was Rutherford, the party's treasurer.

"What's the financial situation, Gordon?"

This time the story was brighter.

"Our cash available is everything that it need be. I can finance any project within reason."

"Plenty of money," muttered Cromwell, "but what do we do with it?"

He pondered, conscious that all eyes were upon him, waiting for a magic solution to their troubles. He knew, too, that if he failed to produce an effective answer and the election went against them, as it inevitably would, he would be swept from leadership and cast into politics' backwoods.

There came a touch at his elbow and a whisper in his ear.
"May I speak to you privately?"

"What is it?" asked Cromwell, turning to face the young, fresh-faced speaker, a protege of his and the shadow Minister for Space Research.

"I'd prefer to get away from the others for a moment, if you don't mind."

Cromwell made his excuses to the meeting and led the way into an adjoining room.

"Well?" he said, a trifle abruptly, as the door closed behind them.

Julian Clements was rather diffident. "I don't know how to put this," he began, "but the government's recent actions smell to high heaven."

"They must smell like an odour of success to them," grunted Cromwell. "What do you mean exactly?"

"They couldn't have been in a worse position a couple of weeks ago," pointed out Clements. "Just think back: they'd been disastrously wrong abroad, and nearer home, things were even worse—everything pointed to them stalling until the last possible moment before holding an election in the hope that a miracle would turn up to help them out of the mess they were in."

"They've produced a series of miracles," argued Cromwell. "Look at the swings there have been."

"Agreed," said the younger man becoming more confident. "*Produced* is the operative word—I think they *knew* they were going to produce these changes *before* they announced the election—that's what decided them to do it, they *knew* what was going to happen."

"Go on, said Cromwell, shortly. "How could they know?"

"Just one thing more," said Clements, "have you noticed that the biggest change in public opinion came first, then each additional one was slightly less?"

"You're right," commented Cromwell, "that's not the normal way of things—support usually builds up more slowly from an uncertain start—this has been a land-slide. What's the answer?"

Clements was frank. "I don't know—I wanted to ask you if you knew of some master tactician in the Rabidist party, someone capable of thinking out such a programme—it's masterly in conception."

Cromwell bridled. "It's a wonderful set of promises, I agree, but that's all, they'll never carry it out."

"That's not the point, it appeals to the electorate."

The opposition party leader frowned wryly. "True, but I can't think of any big-brain of theirs who could have designed this for them."

Both men were silent, but there was an air of something realised about Clements.

"You've got a proposition, haven't you?" probed Cromwell, shrewdly. "Well, out with it man, this is no time for beating about the bush."

"I'd like to spend some money to find out how they did it."

"Who's going to answer the question for you?" asked the older man, beginning to move towards the door. "And what good would it do even if we did know?"

Clements dealt with the questions seriatim. "We can buy time on one of the commercial computers and put the problem to it, and who knows, maybe we'll think of a way of getting around things then."

"How much will it cost?"

"About a hundred a minute—and we'll probably need an hour to set it up and get a result."

"Six thousand," whistled Cromwell. "All right, I'll go along with you—but you'd better be right."

Cromwell and Clements met again the following afternoon.

"There's been another 3.9% gain by the government after last night's speech," said the older man bitterly.

Clements managed to look sombre and triumphant all at once. "The whole damned thing makes sense now—do you know how they did it?"

"No—you tell me—how did the computer add it up?"

"The government themselves used a computer to design their programme for them—we're competing with a machine intelligence."

"The cunning swine!" expostulated Cromwell. "Now where do we go?"

"I wish I knew," the youthful face was beginning to show the strain of political set-back.

The time remaining before the election dwindled until it was measurable in hours rather than days, and political commentators were writing off the opposition for the next ten years.

Government circles sat back confidently, assured as they were of the massive support of 73.7% of the electorate.

With a scant twenty hours remaining, Cromwell racked his brains for some trump card to play in his concluding broadcast on the eve of the poll, and had a desperate idea. If one computer had mapped out the government's winning scheme, he reasoned, couldn't another computer provide a counterblast? That afternoon he sat alone before the microphone of the machine Clements had used and posed the question. Within two seconds, he had his answer in just three words.

Virtually the whole nation tuned in to Cromwell's broadcast, curious to see how a politically dying man would speak on his public death-bed.

He began by reminding them of the government's fiasco in the recent past and traced events right up to the impressive results produced by their election broadcasts.

"No doubt you have wondered how the government can have guessed so phenomenally right," he said, "and so have I. And now I can tell you how it was done—the government miracle was produced by an electronic intellect, a computer, a machine intelligence—I leave it to you to decide whether you wish to be ruled by men or machines—for such is the choice. Think wisely and think well when you cast your votes tomorrow—goodnight."

Twenty-nine hours later, Cromwell knew the nation's answer. At 2 a.m. when three hundred and fifty two seats had been declared for the former opposition party and only ninety-one for the Rabidists, the Premier conceded the election; what happened in the remaining hundred and fifty-seven wouldn't make much difference to anyone.

"We owe it all to you, Clements," declared Cromwell. "If you hadn't gone to the computer in the first place all would have been lost. There'll be a high position in the Cabinet for you my boy."

"But how did you conceive of telling the people?" asked a puzzled but happy Clements.

"Come, come," chuckled the Premier-to-be, "success has fuddled your wits—I asked the computer, of course—and it said just that: 'Tell the people.' "

Julian Clements' face cleared for a moment, then paled rapidly.

"What's the matter?" queried a suddenly solicitous Cromwell. "Are you ill?"

"What a joke," replied Clements, "What a joke! Don't you see what will happen now? The government bright boys will ask their computer how you discovered their duplicity, and they'll be told that *you* used a computer to sway the people's opinions, too, then where will we be? Because next *they'll* tell the people of your duplicity!" Abruptly he broke into peal after peal of hysterical laughter. He was still rocking with crazy mirth when the Sovereign's messenger arrived with the invitation for Cromwell to form a government.

steve hall

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The trouble is, I suppose, that I have always looked after my younger twin brother, even when we were kids. Consequently, even though I hated him, I couldn't leave him on the planet Celenthenis, not even when he had died.

farewell, dear brother

by p. f. woods

Strangers are a nuisance. Few people have anything new to say to a man once he's settled down in life.

But occasionally someone turns up whose chance words stir up vivid memories, and set me thinking again.

A man like that turned up at a small party my wife and I gave. He was small, agile, about forty, and he may have been intoxicated. With his type, it's hard to tell. Some friends of ours had brought him along, and he clearly didn't know whose house it was he had come to.

He was one of those people who can't stop talking. I steer clear of talkers usually, but he managed to corner me and so I let him chatter volubly on for a few minutes.

Then I discovered that this one was different, from my point of view. He had just returned from an expedition to Celenthenis, the Planet of Cold.

I became more alive to him. "Oh yes," I said, "I had heard there was a second expedition. What did you think of the place?"

"Well, the cold's pretty drastic."

"Too much for you, eh?"

"Yes." He nodded emphatically, as if he could read my mind. "It's too cold for description. There's practically no temperature to the place at all. Goddammit, it's right at the dead end of creation."

I pondered over his words. The dead end of creation . . .

He hadn't much of a gift for word-pictures, but my imagination and memory made up for it. He was right. There's a minimal amount of energy on Celenthenis—some physicists say none at all. There's argument about that. At any rate, every atom and molecule of the whole planet is frozen immobile. No chemical changes. No energy exchanges. Nothing. It's a world without time.

What it must be like to live there, looking over its dark surface through a televiser from inside an alloy dome—any ordinary material simply crumbles away—and know that nothing happens there, ever.

It led to strange possibilities, as a matter of fact. The material of the planet is super-conducting, but nothing ever happened to cause a current. Electricity had no place there—until the explorers came. As an experiment, Professor Juker discharged a million volts into the ground. It flashed right round the planet and is still going. The whole planet is alive with that circling million volts which never decreases.

"You can't have actually *felt* cold," I said.

"No, but you can see it. Goddammit, you *can* feel it. But not with your senses. With your emotions. Get me?"

"Yes, I think so."

"If only there was some *starlight*, or something like that. But just darkness. We could only see by the reflection of our own beams. I'd have liked to set off some hydrogen bombs, just to show the place some action."

"It wouldn't have made much difference."

"No, I guess not." He laughed. "Say, you're a good listener, aren't you?"

"Oh, I know all about Celenthenis. My brother and I were on the ship that discovered it."

He looked at me with new interest. "Say . . . you must be —"

"Robert Stemming." I held out my hand.

He shook it vigorously. "I never realised who I was talking to."

"As a matter of fact," I continued, "my brother is upstairs. Perhaps you would like to meet him."

He looked alarmed. "No! I mean, I've promised to have a word with somebody in the other room . . ." He backed away.

This time it was my turn to laugh.

I hid myself for the rest of the evening and left the guests to my expert and sociable wife. Crowds don't interest me. In recent years I've developed a liking for a peaceful, solitary life.

At about two o'clock in the morning I heard the sounds of the party diminish. The few people left were talking quietly in the lounge, and they would probably stay for another hour.

I decided to go upstairs and look at my brother.

Not many people care to meet Jack, and I can't say I blame them. There's something decidedly eerie about it all.

But I'm not afraid of him. I mounted the wooden stairs to the top of the house. Towards the attic, where we keep Jack, it gets musty. Janet never comes up here, so neither the steps nor the attic get cleaned. Cobwebs brushed me frequently. Outside the door of the attic I could hear the low hum of the apparatus on the other side.

I opened the door and went in. The attic is illuminated by a dim yellow electric light bulb which is always on because I forgot to install a switch. To the right of the door a thick power cable comes snaking through the wall and across to the other side of the room. The cable's a thick one. We need a lot of power to keep the temperature down.

And on the dirty table opposite was a silicon container, two foot on the side, surrounded by Professor Juker's refrigerators.

Closing the door, I walked across. "How are you today, Jack?" I said.

There was a definite pause, before the small speaker attached to the cannister spoke in a weary voice.

"Can't complain, Robert," it said disconsolately.

Brother Jack, it is a hard life I have lived with you!

Ever since the day of our birth, Jack and I have been together. I arrived first, and Jack came pushing and shoving his way awkwardly right after. Or so I like to think.

Perhaps I even gave him a hand. Because I've been looking back over my shoulder and hauling him over his troubles ever since.

You could never avoid trouble, could you, Jack? It's in your nature to steep yourself in it. Show you a doubtful situation, a compromising situation, a *sneaky* situation, and you plunge right in without regard for anyone. That's why you have a hundred enemies on every inhabited planet.

I don't say you intend it. You just revel in temptation; you can't resist an opportunity to cheat. By why, Jack, why have you such a knack of doing it when a blind donkey could see you'll be found out?

I'm not exempt from Jack's ways, in fact I've borne the life-long brunt of them. Even when we were youngsters he would borrow my cycle for an hour and sell it on the other side of town for a few pounds. Then he would stall for days on end before I found out. He would always stall. And several times he stole my girl from behind my back.

That would make me really mad. But even then, Jack always seemed to get away with it. Somehow he would crawl from under like an indestructible insect. His technique was quite simple. Stall. Stay out of the way. Sooner or later, you lost the heart to hit back at him.

When we grew up we set up in business together as go-getters.

Go-getters are a kind of glorified galactic scrap merchant. All you need is backing, and a ship, and somewhere unexplored to go. Or you can take a shot in the dark, but that's pretty desperate. You arrive, look the place over, and when you come back you trade in whatever you've discovered there. There's a high premium on information in modern civilisation. If you're lucky you might sell a concession on raw materials. More often you make money on selling scientific data, so a go-getter prefers weird places. At the very least the government pays a tithe for having assayed another planet.

Let me make it clear now in regard to my complaints about my brother Jack, that we're nothing particularly fine as human beings go. The galaxy is wide and unknown, and there are thousands of free-lance go-getting teams. Usually they have a vast amount of technical knowledge haphazardly acquired, but no qualifications of any kind. Usually profes-

sional men despise them. In a nutshell, they live in a way qualified men disdain, and Jack and I were fairly representative, trading in second-hand plant and equipment when we didn't have a job.

Our relationship was what you would expect of two brothers, but looking back I can see its unpleasant tinge.

You never played straight with me, did you, Jack? It was in little things. The small deals. After not seeing you for a week or two, I would get a letter like this:

Dear Bob, the time has come I think to let you know the truth about the cheque. All that I've been telling you about it not arriving and then not cashing it is a load of ruthless lies, what really happened is that I was desperate for money and had the audacity to spend the bloody lot. Please don't think too badly of me, I know the sob-story stuff isn't much use to you, and all I can do now is try to pay it back somehow . . .

And so on. Typical. A frank confession, interlarded with self-pity and promises for the future. That for five hundred pounds or so.

When I faced him, he would say: "I didn't think you'd mind, Bob. After all, we are brothers."

He was right, I didn't really mind when it was over, even though repayment was never forthcoming. After all, we *were* brothers.

Not until years later did it seem odd to me that I tacitly took Jack for a younger brother, instead of my twin. He seemed so much younger, so much more irresponsible.

And so we stuck together, and I looked after my brother. How often, Jack, did I have to pull you off the spot? I've had to kill men to save your neck. Some of the quarters you frequented weren't fussy about how they dealt with undesirables.

Do you remember the time we cracked up on the tenth world of a star with no name, only a number? You were unconscious and I wasn't sure you were still alive. But for twenty days I hauled you in your suit over the surface of that planet to make rendezvous with the liaison ship coming up behind us. I've never been through anything else as bad as that, because I didn't believe for a minute that we were going to make it and I was glad you didn't know what was happening.

Would you have done the same for me? I think so. But of course you had to be the one to get hurt, and it's been like that all along the line. You've never had much opportunity to do me favours.

It's a funny thing, Jack. As well as a predilection to be underhand, you also have the worst possible luck.

Well, that was how we continued in life for thirty-five years. Every five years or so, I could have looked back and said that the conditions of existence were getting meaner and more desperate. Nothing *satisfying* ever turned up for me. There was no fulfilment. It was the same for Jack, but he never even thought of that sort of thing. Jack was born for the rat-race.

Year by year, we became more and more enclosed in our way of life.

Then came the time I met Janet.

Don't ask me how I managed to hit it off, because she, to use a phrase, is way out of our class. She is the daughter of Professor Juker, a name that means something in academic circles. But manage it I did, and then I felt I'd found something.

It had been worth crawling out of the womb, just ahead of complaining Jack, after all.

Soon we were planning to marry.

There was still the question of her father, however, and I admit I felt apprehensive on the day he came with Janet to see Jack and me in our dingy office in the back room of a third floor on Stain Street. Go-getters aren't always considered the best of choices for a well set-up young lady.

Imagine my relief to find that Professor Juker is a short, dumpy fellow with a cropped beard who doesn't care a hang about one's station in life. He's only interested in what you can do. Inside ten minutes we were talking shop and enjoying it.

"Well," he said at last, "what work have you fellows got at present?"

Jack sighed. "None," I admitted.

"Nothing lined up?"

"We *have* got a lead, though it's rather confidential. We happened to get a tip-off about a ship that passed the fringe of the Montgomery Cloudbank. As you know, the tempera-

ture inside the cloudbank is thought to be practically nonexistent."

Juker nodded.

"They detected a solid body inside the bank," I continued. "It couldn't be a sun, so it must be a stray planet. They even gave it a name. *Celenthenis*."

"There's always a profit in low temperature physics," Jack put in. "It's just that we haven't got the capital."

Juker's eyes had already started forward with interest. It transpired that low temperatures were his special province, and he agreed enthusiastically that the field was by no means exhausted. Ultimate zero is too remote to be normally obtained. The Montgomery cloudbank is an isolated case and no one had come across anything like it before.

Juker suddenly became adamant about investigating the planet. Before we knew it he was putting up money and planning to accompany us.

We snapped up the proposal like hungry wolves. "You won't regret it," Jack said eagerly, getting hold of the wrong end of the stick as usual. "You'll get your money back, all right."

The Professor scarcely seemed to hear the remark, so Jack started talking about the special equipment we would need, while Janet sat on the edge of the desk and swung her legs.

Juker also made a list of stuff he wanted to take with him. Jack glanced at it.

"I know places in San Francisco where I might get some of this cheap," he said. "It'll need Bob or me to swing the deal, though."

"San Francisco?" Juker said in surprise. "Can't you get it here in London?"

Jack shrugged his skinny shoulders. "You don't understand. San Fran is one big junkheap, for people like us. It would be worth the fare."

"All right, go ahead," Juker told him.

"I'll come with you to sign the cheques," Janet said, speaking for the first time in half an hour.

"Er — yeah, I guess somebody ought to," Jack muttered.

And there we were, set up. It seemed to me that Juker was being a mite too trusting, but on reflection he had

nothing to lose, had he? If we didn't play straight with him, he'd know he didn't want me for a son-in-law.

But we did play straight. We all worked hard, collecting our gear together and fitting out our ancient ship with the drive cartridges necessary to make the jump to Montgomery. That's what takes the money in go-getting: not the ship, since most free-lancers of long standing have a crate of some description, but the cartridges to power it. The further you want to go, the more expensive the cartridges you need.

Several times Jack and Janet went on expeditions to gather equipment. One thing Jack does know better than I do is how to drive a bargain. And I felt happy for the first time in my life, thinking of how things were going to be when we got back. Looking back now, I feel slightly ashamed of the way I walked around with my head in the clouds.

There came the day when Juker, Jack and I ferried our ship out to Stand-off Station, spending a few hours there getting clearance. I enjoyed that brief wait in Stand-off as I had rarely done before. It was crowded with go-getters, as usual. The hardened and scarred, the young and inexperienced, the sly and clever, and, amazingly, the ingenuous who had managed to remain so even after years at the game. The outward-going bustle of men bent on galactic prospecting is something you never forget. The veneer of civilisation is off, but just the same some of the genuine fragments of it can be discerned.

I spoke to one old fellow there who said he was on his way to a rich seam of time-gems, the stones which refract through time instead of space. Why, that old El-Dorado has been a joke for years! Naturally he couldn't be made to divulge where it was. Already he had said too much, for it has been known for a go-getter to set off with half a dozen others hot on his drive-trail.

Then there are the incoming teams, exuberant, disappointed, or just plain exhausted. They fill the taverns of Stand-off, to lay down their heads on the tables, fill themselves with cheap whisky, or shake it up with the bar whores.

It was not long before we left behind the blare of gaudy music, the unshaded lights and unwashed clearance officials. We were off into the galactic dark, where the stars were like electrons in a plasma and the few thousand spaceships

rayed off from Stand-off Station like a scattering of invulnerable neutrinos.

After about a month we came to the edge of Montgomery Cloudbank.

It was an awesome sight.

From most vantage points in the galaxy you can see stars in every direction. It's only from a few places like the Cloudbank that you find yourself confronted with a deep vasty expanse of darkness. Actually the dust and gas compassing the Cloudbank is of course itself more tenuous than any vacuum we can make in the laboratory, but since it stretches for thousands of light-years that's easily enough to obscure the stars on the other side.

A peculiarity of the Montgomery Cloudbank is that it excludes stars anywhere within its compass. Nobody knows why. The consequence is that the interior of the cloud is not heated up, like most banks such as the Coalsack. With any luck, we might find that deep within the Cloudbank there was no thermal activity at all.

We stood at the viewplate and studied the Cloudbank from close up. Jack regarded it dourly. Juker's eyes gleamed.

"Promising!" he exclaimed. "It looks promising!"

We set up the mass detector, and after locating the pinpoint concentration of matter within the cloud, plunged right in.

At once we were in the dark, nosing through unrelieved blackness.

Juker watched the ship's sensors anxiously. "The temperature's going down," he announced.

"Yeah, well what do you expect?" Jack growled.

I should explain that after a month in transit, Jack and I were both apt to be on edge. On this occasion I was in uncommonly good humour, which probably made Jack even more irritable.

Juker frowned as the record dropped even lower. "We might have some difficulties to contend with," he warned. "We took precautions, I know, but — well, quite frankly at sub-zero temperatures materials just don't behave the same."

"I know that," Jack said. "You're not telling us the hull is going to crumble away, are you? It's painted with atom-bond."

"That will help, admittedly. Well, we shall see. We may have to keep feeding energy into the plating to maintain its strength."

Jack grunted, glanced at me and chuckled. "If anything happens I'll just go to bed and pull the covers over me."

"As for me," I said when Juker had left the room, "If it gets cold I'll just think of getting back and cuddling up to Janet."

He gave me a funny look, as if the joke wasn't appreciated. "I knew you'd say that. You've done nothing but talk of that girl all the trip."

"Well, why not?" I said defensively. "You're just jealous."

"Hmm. It's not that. It just seems to be preying on your mind, that's all. Don't let yourself get neurotic over it."

I was mildly surprised, but didn't answer. Jack sat down and started fiddling aimlessly with the knobs on the control board. He talked on for a bit in the desultory, strained way he sometimes has, but it became more and more vague and I didn't really listen.

Professor Juker spent most of his time monitoring the skin sensors. They didn't all record hull conditions, many of them were long-range scanners, which he pointed in all directions. He was anxious to know just how much radiation energy did trickle through that blanket of dust and gas.

One day he came triumphantly into the control room. "I've been watching the sternwards detector for the past hour," he said. "The reception in that direction is now nil!"

Nil. Along with all the other directions. We were completely cut off from the outside universe. There was a region of hundreds of light-years completely lacking in energy.

It was still some days after that announcement that we came upon Celenthenis.

Professor Juker was able to say with certainty that not one photon of energy ever touched upon that world, or ever had done so in apprehendable history, until our arrival. We cast our laser beams upon it, sweeping its dead surface from hundreds of miles away. Soon we were able to make our second assertion: not only was it out of reach of external energy, for some reason it had no internal heat of its own.

There was not one calory, not one quantum of heat in the whole planet.

Here it was, locked away in itself, no warmth, no life, no movement. Just timeless death.

"This is it, lads!" Professor Juker said, slapping us both on the back. "The Planet of No Temperature! The matter down there has mighty different properties from the stuff we're used to, I assure you. It's a magic place."

Warily, we set ourselves down on the surface.

It was as Juker had predicted: we needed extra safeguards to keep our ship in one piece. Our first hour, spent in installing a micro-heating system to all parts of the ship, was a tense period.

At last the ordeal was over and we were safe. Gathering in the control room, we turned the external television scanners to view the terrain.

Searchlights atop the ship cast a circle of illumination a hundred yards across. Beyond that we could see nothing, but only *sense* the dark and the cold stretching away in a vacuum.

Inside the circle the ground was fairly level, but broken and uneven, forming slabs and runs which seemed to be leading away into its own mysteries. I saw that at one point near the perimeter it broke into a shallow crevice. Add to this its colour: a dull, dark green.

And the sky? We just couldn't see anything above. Remember that in the ordinary sense of the word Celenthesis has no sky, in that nothing reaches it from outside so that for practical purposes nothing exists for it above its own surface.

Summing up my impressions of it, I can only say that it looked sullen and suicidal.

Needless to say, none of us took time to gawp, or to be poetical about it, or even excited, because now we had to get down to a serious job of work, which we did without delay or question.

Juker was happy to take charge of most of the experiments, and I must say he made a more thorough job of it than we would have done. That's how it should be, of course, he being a professor, but I couldn't help reflecting how many go-getters had received only a fragment of what a planet's actually worth through having an inadequate knowledge of some field or other. Watching the Professor at work, I got

an insight into a real scientific mind, instead of just hit-and-miss merchants like us.

His enthusiasm was enormous. Piece by piece we man-handled equipment outside, bringing it back inside when it looked like being damaged by the lack of temperature. Eventually we rigged up minimal heaters for all of it, but until then Jack and I had some pretty heavy work to do.

Then we just helped Juker in the dozens of experiments he had planned. He had brought specimens of every conceivable material with him, and was investigating their properties in null-heat conditions. We had to leave the samples outside for a while before absolutely all their heat leaked away, but when we began testing Juker became more and more pleased.

"Boys," he said, "this is where the study of matter should begin. Up to now its nature has been obscured by always being in a state of heat. For the first time I have an opportunity to study it in a state of rest."

It was soon after this that he discharged the million volts into the planet. For some hours he built up an accumulation from the ship's generator, then let it all rip in a millisecond. Hours later, it hadn't dropped one volt. The planet was full of electricity, zipping round in a world where all materials were super-conductive and there was zero resistance.

Jack's imagination was caught by it. "What do you think of that!" he said. "It'll still be here in a million years!"

Personally, I began to look forward to the hour when we would take off. You do begin to feel the deadness of the place, as the guest at my party said. If you think the Moon is lifeless, you should go to Celenthenis.

By the third day I was making definite plans for the future. "What are you going to do when Janet and I are married?" I asked Jack once when the Professor was in the storeroom. "You can stay with us if you like. We'll probably buy a big house, what with the money we'll make on this trip and all."

He made evasive gestures with his hands. "Maybe. You never can tell how things will work out, though."

"What do you mean by that?" I asked, watching him closely.

"Nothing."

"Anyway," I said, "you're welcome." Perhaps it was over-generous of me, but I was feeling expansive and forgetful of past difficulties. I sat down to read while he paced aimlessly about.

Suddenly he said: "Come on, the Prof wants us to take some more readings off the voltmeter. Let's go outside."

"Just one of us can do that."

"Yeah, but — come on, it'll do you good to go outside for a while."

I stood up and we went to the lock, got into our space-suits and cycled ourselves outside.

Briefly I gazed around me at the circle of light. When you're aware of how empty, airless and cold everything is outside your suit, you can hear every tiny sound of its working, the air system especially. Then we walked over to read the voltmeter which Juker had left in contact with the ground to keep a check on the super-conducting discharge.

It still read exactly what it had read hours before. Something like one million volts.

"Well, that's that," I said in satisfaction.

"Bob," Jack said nervously. "There's something I've been meaning to tell you."

"What?"

"Well, it's about me and Janet."

An icy feeling passed through my stomach. "What do you mean, *you* and Janet?"

"She's not going to marry you. She and I — we sort of got together."

I didn't take it in for a minute. Then it trickled through and thoughts whirled round in my head.

I didn't answer, but I looked at him.

"Honest, I didn't mean to," he said quickly. "It just happened, that's all. It was on the trip to San Francisco. There was nothing we could do about it."

He was avoiding my gaze. "You don't mean," I said in a whisper, "*you* two are married — and didn't tell me?"

"Well, no, not exactly, but as good as."

He edged away as fury began to mount in me. "It just happened — "

"Happened, hell!" I snarled. "You mean you saw a chance and pushed it for all you were worth; I'll bet you really worked on it!"

He looked wretched, like he always does when he's caught out.

"But this time," I said, my breath coming short, "this time — "

As I spoke, I saw how clever Jack had been. When he confesses, he has to do it from a distance, or at least be able to stay out of the way for a while. But where could he go on board our ship?

So he had inveigled me outside. He knew that as long as he can slow things down, it will go easier for him. Angry as I was, I knew it, too. There comes a point when you just haven't got the heart any more.

But whatever I might have known intellectually, I was still incensed. "This time," I said, "I'm going to kill you."

Jack turned and ran, lumbering away in his spacesuit. Standard technique. I put all my strength into lumbering along after him. I knew I wasn't going to kill him, but I was determined I was going to drag him back inside that ship and turn brother Jack into a blood pudding.

There was no pretence about that. He must have felt it too, because his flight became desperate. At first he lumbered erratically, making little random turns to try to take advantage of the broken ground, but I gained on him. Suddenly he made straight for the perimeter of the light circle.

I saw his stratagem. He would skulk out in the dark for a while, where I couldn't find him. When he deemed he had been away long enough for me to cool down, he would return.

Nearing the edge of the circle, Jack's movements became more purposeful. He reached the shallow crevice I had noticed earlier, and started to clamber down it. Once he had climbed up the other side, he would be safe.

With that move, Jack made his mistake.

The ground beneath us was alive with a million volts. Since electricity takes the shortest route it showed no inclination to flow through us provided we walked over the top of it. You may have observed on Earth that birds alight on naked power cables with no ill effects.

Climbing part-way down one wall of the crevice, Jack reached across to touch the opposite wall, intending to haul himself up the other side. That made him a bridge.

A million volts flashed instantly through him.

Though I saw the flash, nothing came over the intercom. I kept running, but when I looked down into the crevice there was not much to see.

Automatically I glanced at the meter on my way back to the ship. The voltage had depreciated noticeably.

Taking into account the way Jack had behaved all his life, I suppose an end like that was destined to overtake him eventually. Still, I was his brother, and I felt unhappy about it.

There was more to come yet.

When I broke the news to Juker I decided not to tell him the part about Janet. It's not nice to disclose a thing like that about a man's daughter.

I felt sadly, strangely miserable because of the death of my brother. Loneliness assailed me. I felt that I was right back where I started, but without even his company.

Juker noticed. He was very sympathetic.

"You mustn't let it overpower you," he advised kindly. "What's gone is gone. There's still plenty ahead in the future."

Bleakly, I nodded. Juker didn't know about the other edge of the sword.

Celenthenis oppressed me more and more.

Both Juker and I continued our work. By now we had amassed a formidable number of graphs, charts and measurements about no-temperature materials. Results were everything we had hoped.

For some time Juker had been thinking about the problem of transferring Celenthenis material to Earth, and he decided it could be done. Assembling the refrigerating apparatus in the storeroom, he put on a suit and went outside.

A few minutes later he was back with a chunk of dull, greenish rock wrapped in a jacket of hydrogen ice. "I chipped it off one of those big slabs," he explained. "We can give it a really detailed study in here."

Carrying it into the storeroom, he slipped the hydrogen jacket into the quadruple-hulled container he had prepared. Carefully he poked electrode probes through the ice, an awkward job, because of the clutter of refrigerators. A number of oscilloscopes started wiggling the moment he made contact.

"This rock has an electric charge on it, like the rest of the planet," Juker told me. "This is to see if it's been modified in any way since I pumped it into the ground."

Taking a step back, he glanced at the oscilloscopes.

His glance protracted itself into a prolonged stare.

"Great Scott," he muttered.

"What's up?" I asked. The 'scope sweeps had surprised me, too, but after all it was an unusual world.

"Robert, those signals are brain waves."

With a jolt, I realised why they seemed vaguely familiar. I had seen films of electro-encephalography, of course.

"The alpa rhythm is quite clear," Juker commented, peering closer. "Some of the others are a bit scrambled—but that's probably because we're getting two or more on one scope." He started speaking quickly. "Don't you see what's happened? It's Jack! When the current swept through him, it was modulated by the electrical rhythms of his nervous system." He splapped his hands together excitedly. "It's just what *could* happen in a zero-temperature environment!"

"You don't mean he's still alive?"

Doubtfully, he shook his head. "That's going a bit too far—"

Then he cut himself short. The 'scope waves had suddenly altered, just like they do in electro-encephalography when mental activity changes.

After that there was no help for it. Professor Juker constructed a frequency analyser to differentiate between the various waves, then rigged up a speaker and microphone. It did not take many minutes of ranging through the waveband before we hit on Jack's speech frequency.

Quavering, I held the microphone in my right hand. "Jack?"

A second or two later, I heard a familiar voice. "Is that you, Bob?" it said uncertainly.

Juker and I looked at one another, shocked beyond expectation. I had no need to ask further questions.

The modulations of the million-volt pulse had been quite complete. Jack's entire pattern of personality, memory and thought had been transferred to it, and was now humming unimpeded in a continuous circuit of the planet. There was no fragment of Celenthenis that you might break off that was not Jack.

So that was how I continued to be my brother's keeper. After all, we had planned to take material back to Earth. What else could we do, but take him home with us?

Faintly, I heard the front door open and close as one of the guests left downstairs. I gazed at the chunk of green rock, visible more to the imagination than the eye, amidst Juker's hydrogen-ice apparatus, and thought of how helpless and quiescent Jack was now.

In all the years we had been together, it was not until those few remaining days on Celenthenis and the journey back to Earth, that I gave consideration to my relationship with Jack.

Did I ever love my brother?

A hard question. I don't think there is love between brothers. We took each other for granted. There were things I didn't like about him, but all the hard feelings tended to be of short duration.

On the other hand, whenever I hated my brother I had the sinking feeling that I was exactly like him.

The difference being, that when I cheat I cover my tracks.

As it was, I had come out of it all right. I had Janet, hadn't I? She wouldn't even speak to this lump of rock, not once. She married me.

A bitch? You might say so. It might appear odd that I'd still take up with her. But isn't human nature frail in any case? Take the best and leave the worst.

It's no use to fret.

We lived fairly comfortably on the proceeds from Celenthenis. As I said, I've settled down. It suits me.

Moving closer, I said: "Are you *sure* everything's all right, Jack?"

"Well," he answered. "My mind's been getting a bit fuzzy lately. I think a trace of heat must be getting through."

I nodded. That was inevitable. If the temperature rose even a fraction of an appreciable amount, though, the rock would cease to become conductive and that would be the end of Jack.

"For another thing," he said, "you know the main version of me is still on Celenthenis, I'm a sort of detached fragment."

"You're still a complete replica, Jack."

"I know. But, well—frankly, I sometimes feel an urge to be re-united with myself. Merge with the main current."

"You want to go back?"

"I wouldn't mind."

"Well, Jack," I said after a moment. "I don't know. Janet might not think we can afford the cartridges for another trip to Montgomery Cloudbank."

"You mean you won't take me?" he said in a piteous voice.

"You know *I* would, whatever it cost. But there's still Janet."

"Bring her up here," he said eagerly. "I'll persuade her, Bob, I know I can. We were close once, remember?"

I didn't need the reminder.

"You know what she's like. Wild horses wouldn't drag her up here. She never comes."

Silence, but I could feel the hurt in it. Eventually Jack spoke again in a strained voice.

"Look, Bob, I . . . well, I do want to go back to Celenthenis and I'm sure once she speaks with me she'll agree. But it isn't just that. I really want to speak to her, you know. It isn't pleasant the way she ignores me. I know she's married to you now, but—I just want to say goodbye, that's all. You can't begrudge me that."

I was genuinely touched.

"Please, Bob, *please* bring her up here. Just once."

"I'll try," I promised.

A faint sigh of relief came from the speaker. "Bring her up here, and that's the last thing I'll ever ask of you."

Turning, I went through the unpainted door, down the rickety stairs, within range of the sounds, light and perfumes of the living rooms and what remained of our smart society guests. Idly, I calculated the cost of another trip to Celenthenis.

I waited for all the guests to leave before I put the idea to Janet. She twisted her handkerchief in a distraught manner.

"It's too much," she said shortly. "We can't spare the money."

"But he's my brother."

Crossly she patted her hair back into place. "That lump of rock—can't you find some other way of getting rid of it?"

Throw it in the sea or something? As a matter of fact I've been meaning to get the thing out of the house."

She stood up, smoothed her skirt and bent to study her make-up in the mirror. I stared at her aghast.

"Janet," I began as she touched her eyebrow with a wetted finger, "he wants to talk to you."

"You won't catch me going up there!"

"It isn't much to ask," I pleaded. "He's a person, Janet, someone you once . . . had relations with. Doesn't that mean anything to you? He only wants to say goodbye, so there's no bitterness."

She turned on her stiletto heel and stalked from the room. Before I knew it I was on my feet too, following after her and arguing.

Don't ask me to explain the state I was in. Nothing seemed more important to me than that I carried out what I was convinced was my brother Jack's last request. For an hour I talked earnestly in our bedroom. Janet seemed to grow more weary by the minute.

At last I said: "He's still *alive*. Don't you understand?"

And that, of course, was exactly what she never had understood. Perhaps, I thought, people never are alive to her.

"What is it to do with me?" she complained, ready to burst into tears.

Then, resigned and tired, Janet dragged herself to her feet and came with me to the back part of the house.

I sensed how scared she was as we ascended the stairs, and kept my hand touching her arm. Poor kid, I thought. Then I opened the door and led her into the musty, humming attic.

She gazed around her, frightened by the alienness of everything she saw. She was completely out of her depth.

"Jack," I said, "here's Janet."

There was a barely perceptible pause.

Then a voice came hoarsely through the speaker which shook even me by the intensity of its hatred and bitterness. "You finally arrived, you filthy slut, did you?" it said. "How bloody nice!"

It seemed to gather its breath, then vomited a paralysing stream of obscenity and execration. Through it all I seemed to hear the resentment, the disappointment, which Jack had harboured all this time. I realized that everything Janet meant

to me, she must have meant to him. She had filled the void of his life, just as she had filled mine. And *that* was why Jack wanted to speak to Janet.

He never gives up. If he can't have it one way, he'll have it the other.

Janet let out a small, terrified cry, turned and fled. I heard her sharp heels clattering on the stairs.

"Why did you do that?" I exploded.

"Just to give her a few nightmares," he answered sardonically. "By the way, I've a confession to make. You know everything I said about taking Janet away from you? It wasn't even true!"

That was all I got out of him. I stood there, absolutely stunned. I had never taxed Janet about her defection; I was afraid of appearing jealous.

Now that Jack had made his confession, I suddenly realized how utterly ridiculous was the notion that Janet would ever have had an affair with him, or even, at that stage, been unfaithful to me at all. She just wasn't that sort.

And yet I had believed it. Jack had gauged exactly what would take place in my mind, even to the years-long silence. In his crooked way he had a real genius for it.

In those few seconds the full tragedy of Jack became clear to me. His envy, resulting in a cruel taunt. Then, after the unforeseen outcome, endless brooding. Poor brother, he was deranged with it!

I dashed downstairs, but Janet was already leaving. She went without even taking her beautiful clothes, her expensive jewelry. She packed a small case, slammed the front door without a word and was gone.

Next day I called on Professor Juker. Without talking much about Janet I told him about Jack.

He nodded thoughtfully, knocked the ash out of his pipe and put it away.

"You're right," he said. "That fact is, we can't hope to keep him alive indefinitely. The temperature's bound to rise, even if only marginally, and it will be no consolation to him to know that the main current is still flowing on Celenthenis. It's only common humanity to save his life."

Juker put up the money for the costly cartridges, and I flew the ship. As for Jack, I didn't even ask him if he still

wanted to go. I wasn't giving him the option, because I knew that once he was gone I could have Janet back.

Landing on Celenthenis, I stood outside the airlock, took the green rock in my gloved hand and flung it as far as I could.

I didn't even see it land.

Farewell, brother Jack, may you have a long life! The Montgomery Cloudbank is a huge affair and doesn't move much, so it ought to be a long one. You'll live until Celenthenis warms up, so you'll probably still be there when Earth is gone.

Be grateful for the enclosing dark. When the stars start to shine through, your cold vigil will be over.

As for me, I'm happier with my flesh and blood. I'll enjoy Janet for a few years, then let this body of mine gutter quietly out.

Sometimes I hear her whimpering in the night, but I reach out to her, wake her and comfort her, and it's all right.

p. f. woods.

The Editor Regrets . . .

to announce to all readers that this issue of NEW WORLDS SCIENCE FICTION is the last to be published by Nova Publications Ltd., after eighteen years of continuous appearance.

Arrangements have been made, however, for its continued publication by Roberts & Vinter, Ltd., 44 Milkwood Road, London, S.E.24, from whom an announcement will be forthcoming.

Your Editor regrets that owing to other commitments he will not be connected with the new enterprise.

John Carnell

As E-doy draws nearer for the Great Escape from the prison world holding the cream of Earth's technicians, tension mounts as more and more things go wrong, but Warren is determined that the gamble shall pay off.

open prison

by james white

conclusion

foreword

At a time when the culture of Earth had spread to fifty inhabited systems and her colonisation programme was still expanding, mankind had made contact with another intelligent race—called Bugs because they looked like giant insects and because it had eventually been impossible to crack the language barrier. At first a period of peaceful, if somewhat difficult negotiation had been in force, which inevitably broke down because they could not understand the more subtle workings of each others' minds. From there it was only a short step to war—a war which had now been going on for sixty years with neither side likely to win owing to the evenness of their respective technologies.

Because both sides were humanitarian in their outlook, prisoners were taken rather than killed, but in sixty years the problem of looking after them, of feeding, housing and keeping them far away from combat areas, took more administration than the war effort itself, especially when most of the prisoners were highly skilled technicians whose return to their own side could vitally affect the existing stalemate.

Then the Bugs evolved a brilliant plan—they found an Earth-type planet within their own area of space and landed prisoners to fend for themselves, allowing them sufficient tools to bring their living standards up to an agricultural level but keeping a strict watch on any activities which could lead to the building of an escape ship by placing an obsolete battleship in orbit around the planet. In twenty years the prisoners had built up a reasonable, if sparse, existence.

It was into this prison world that Sector Marshal Warren and the remnants of the crew of his battleship Victorious were eventually landed, and for him to discover that, as the senior officer present, he was now in command of thousands of men and women technicians with many thriving communities and a vast agricultural programme in hand. He finds the personnel split into two factions—those who have gone Civilian and are building a peaceful life upon the planet, marrying and having children, and younger, more recent prisoners, who conform to the space-navy code and are planning the Great Escape.

Warren assumes command and steps up the preparations for the Escape plan but finds that on every hand he is hampered by Civilians under the leadership of Fleet Commander Peters. Despite this he fixes E-Day—the plan being to lure the shuttle ferryship down from the guardship by a metal dummy of a crash-landed enemy reconnaissance vessel, overpower the crew, man it with prisoners and take off and capture the guardship itself.

As E-Day rushes towards them, more and more difficulties are overcome but tempers rise to flashpoint and Warren is hard put to keep the peace between the various factions under his command.

fifteen

"It's one of the trees giving cover to Number Two Attack Point," said Major Hynds worriedly. "Cutting it down when there is no reason to do so will look suspicious to the Bugs, and leaving it as it is won't be any better because it will stand out like a beacon. The tree is dead, of course—the bark was stripped from around the trunk close to ground level, the damage being hidden by the underbrush until the glider pilot noticed the colour change in the foliage and called our attention to it."

"I don't know what we can do about it, sir," he ended grimly. "In three or four months the leaves will drop off, but before then, within two weeks from now, the leaves will have turned bright yellow."

"Yellow," said Kelso viciously, "how very appropriate! I've always said Civilians were no good. They're nothing but cowards and lousy deserters, and we should have kept a closer watch on them—"

"We need those lousy Civilians, Lieutenant," Hutton broke in quietly. "And you can't put a guard on every tree."

For an instant Kelso looked as though he wanted to hit the Major, and Sloan's expression indicated that he might join the Lieutenant in making a combined operation of it. Fielding and Hynds looked worried, but whether over the danger to Hutton or the threat to the success of the Escape was open to doubt. Hutton himself seemed to be the most unconcerned officer in the room. Warren was beginning to have suspicions about Hutton.

Normally a big, mild, almost shy individual, he had recently taken to baiting Kelso and Sloan during Staff meetings—although always quietly and politely. Warren could not help remembering Peters' remarks to the effect that the higher an officer's intelligence the more likelihood of his becoming a traitor.

"All right," said Kelso, visibly controlling himself. "There are a lot of things we *can't* do, like putting our heads between our knees and spitting until we reach escape velocity, but if I could make a constructive suggestion, sir, how about stripping the tree of its greenery, then bend its branches into those of the adjoining trees, anchoring them with ropes and working the living foliage into and around the stripped branches. It would have to be done carefully, of course, and inspected from the air by glider to be sure it looked right . . ."

"Impossible, I'm afraid," said Hutton again. "It would be good enough to fool the guardship, Lieutenant, but you forget that when the dummy is in place they'll probably soft-land a probe in the Escape area. What would fool a telescope will not pass what would amount to a microscopic examination. If the Bugs see a stripped tree with branches from adjoining trees tied across it . . . Well, they'll be as jumpy and suspicious as it is possible for Bugs to get in any

case, and such a blatantly artificial camouflage is taking too big a risk. It would be better to leave the tree as it is."

"That is your suggestion, Major?" asked Kelso, his tone carrying more sarcasm than befitted that of a junior officer.
"Leave the tree as it is?"

"Yes," said Hutton. He looked at the faces around him, then almost apologetically he went on, "Of course I'd also suggest getting off a signal to all posts to have their men go out and kill trees, the same type of tree, in the same way this one was killed. The idea would be to suggest that some kind of infection is attacking this species of tree, and with trees turning yellow all over the continent, I don't think the Bugs would notice that ours had turned yellow a little earlier than the others . . ."

It was the answer, of course. Warren's earlier suspicion of Hutton began to fade, although he still thought it a pity that the Major could not have given his answer without sniping at Kelso.

"Nice thinking, Hutton," he said warmly. "I don't mind admitting that I was badly worried there for a while. Now, is there anything else needing attention before the signals go out?"

Major Hynds shook his head, automatically catching his spectacles as they fell off. Sloan and Kelso were glaring at Hutton, who stared politely back at them. It was Ruth Fielding who spoke.

"Two days ago," she said, using her clinical voice, "there was a bad accident with a battler at the Telford farm. Three men were badly injured, two of them were dead by the time the Lieutenant got them to the hospital. The third, who was Flotilla-Leader Anderson, died this morning. He talked a lot before he died, and if the Lieutenant doesn't mind I'd like to know what exactly happened at that farm."

Kelso and Sloan switched their angry gaze from Hutton to Fielding, but when the Lieutenant turned to face Warren again there was anxiety as well as anger in his expression.

"I've had that farm under observation for three months," Kelso said carefully, "and during that time nothing resembling farming has gone on there. The place has been occupied by as many as seven officers at a time, all members of the opposition. Fleet Commander Peters has stayed there many times recently, and I'm morally certain that the tunnel flooding

operation was mounted from there. That's why, when I was with the battler-hunting party in that area, I thought of mounting a small, unofficial operation of my own . . . ”

Having flushed a battler within half a mile of the farm, Kelso had hit on the idea of wounding it instead of killing it outright with one of the new grenades and herding it towards the Telford stockade. This was a very chancy business, necessitating members of the party running just a few feet beyond reach of the beast's tentacles to make sure it followed them, but they managed it without anyone tripping and being trampled to death. When the battler had been within fifty yards of the stockade and properly lined up they had blinded it and ran clear.

Telford had been asked to move countless times, his farm being one of those due to be burned on E.-Day, but he had refused point-blank to move to the other continent or to give a reason for staying put—being a ringleader of the saboteurs was not a reason which could be mentioned aloud to Committee men. The idea therefore had been to run a battler into his stockade to make him realise that his farm was no longer a safe place, to give him the idea that he was no longer wanted in the area. It had been meant purely as a warning, with absolutely no harm intended. But the battler had been unusually large and Telford's stockade had been in a serious state of disrepair. Instead of shaking the stockade and scaring the occupants of the farmhouse the battler had gone right through it. By the time Kelso and his party got to it with grenades it had gone through the farmhouse too . . .

“ . . . We dug them out of the wreckage and got them to hospital as fast as we could, sir,” Kelso went on soberly, “ but the only one we thought might make it was Flotilla-Leader Anderson. I . . . I'm very sorry about this, sir. I only meant to frighten them off. W-we were looking on the whole thing as a joke, sir. I wouldn't . . . I mean, it's Anderson's plan we're using, even if he did go Civilian at the end . . . ”

You have to look at both sides, Warren thought desperately, striving to hold back his anger. He had to look at the picture of his Committeemen laughing as they played tag with the most deadly menace on the whole planet as well as that of the mangled body of Flotilla-Leader Anderson, the man whose

Plan they were using and who had been solidly behind Warren and the Escape until he discovered that it would entail the destruction of the town which had been named after him. He could not in justice bawl out the Lieutenant because Warren himself shared much of the responsibility for the tragedy. How many times recently had he stated that they must stop at nothing to ensure the success of the Escape?

"I'm sorry about this, too," Warren said dully. He was silent for a moment, thinking. The Escape *had* to come off, to make all the unpleasant and inhuman things which were happening these days worthwhile, and to make sure that they did not happen again. Then briskly, he said, "I take it this thing is not yet general knowledge?"

"The hunting party won't talk, sir," said Kelso, looking relieved.

"And dead men and Staff officers don't tell tales," Hutton added cynically.

"I'm sorry," said Kelso looking at everyone in turn. "Really I am."

Warren shook his head. "It can't be helped. We must expect casualties on an operation of this size and complexity, casualties not directly caused by enemy action—"

"Speaking of incidental casualties, sir," Fielding broke in smoothly, but still looking daggers at Kelso. "Lieutenant Nicholson complains that her girls going to and from duty at the hospitals are being molested by—"

That was as far as she got before Sloan and Kelso shouted her down. Sloan's language was unsuitable for any company, mixed or otherwise, so that it was Kelso's relatively quiet voice which came through when the other had run out of profanity . . .

". . . And this isn't a Sunday school outing we've planned!" the Lieutenant said furiously. "It's a major operation, part of the war! I say these men deserve to get drunk or have sing-songs or play rough—they deserve all the fun they can get, because an awful lot of them won't be alive three weeks from now! They're going to take that ship with suits which are little short of death-traps. I say that with all respect for Major Hutton, who has done wonders with the little he had to work with, but they are still death-traps. He's given us the means of carrying out a successful assault, but with an estimated loss due to component failure—suit failure, remember not enemy action!—of sixty per cent . . .!"

He waved down Hutton's protest with a gesture which was definitely insubordinate and went on passionately, "The men know these odds, they know why we've trained and equipped four times the number of officers needed for the job! Knowing these odds they still want to take part, would consider it a personal tragedy if they were not allowed to do so.

"They are a very special group of officers," he rushed on, "hand-picked for qualities of bravery, aggressiveness and toughness. Major Fielding as well as yourself, sir, went through their dossiers. Some of the officers here don't seem to realise what a really tremendous thing we're doing. This escape will go down in history, and *nothing* is too good for the officers who have the most difficult and dangerous part in it! To my mind, hampering the work with petty complaints and criticisms is little short of treason . . . !"

"Some of the girls," growled Sloan suddenly, "were just asking for it."

Fielding swung furiously on him. "Really, Major?" she said. "You might like to know that one of the case histories I read mentioned severe concussion, caused by a blow from a not too blunt instrument which also necessitated major suturing of the scalp. Presumably the officer in question was playing hard to get. Or is it simply that our gallant assault officers—I hesitate to use the expression 'officers and gentlemen'—have regressed to the point where they must use cave-man methods of courtship?"

"Environmental influences, Major Fielding," Hynds put in, his expression dead-pan. "It comes from too much swinging about in trees . . . "

"That's enough!" said Warren sharply, as Kelso and Sloan opened their mouths for a return blast. He went on, "We all deplore these incidents, naturally, but at the present time I can understand the feelings of Sloan and Kelso. All these officers know that they are expendable and that the greater number of them will be expended, so that the increasing strain they are under calls for our sympathy rather than for disciplinary action. We must try to retain our sense of proportion about this, weighing the relatively minor sufferings against the major achievements we hope to gain.

"I have devoted much thought to the final choosing of these assault groups," Warren continued, trying to inject a lighter note into the proceedings, "and it is unfortunate

that a certain lack of charm is a concomitant to the other qualities I sought—but then who ever heard of a polite commando? We might all feel better if we remember that we're fighting a war, and think of the people we've been discussing as casualties . . .”

As his eyes moved from face to face, Warren was becoming aware that his staff was split down the middle, with Kelso, Sloan and himself ranged against Fielding, Hutton and Hynds. He knew that with each successive meeting the rift would widen and that in time he would have an open mutiny on his hands. The question was, how much time?

Could he hold them all together, and retain their loyalty and active support, for another three weeks?

s i x t e e n

Implacably, E-Day moved from the minus Twenties into the low 'teens. Two practice trips with battler-wagons and ships had been completed within their time schedules and without incident, the wild battlers who would be most likely to cause the incidents having been rendered virtually extinct by Sloan's hunters. The sections of the dummy were ready to go, the ambush tunnels were a few days off completion and the areas for destruction by fire and explosives were being marked out.

The many accidents and set-backs which occurred were of a minor nature and were directly ascribable to nerves in one form or another. There had been no further acts of sabotage.

On Minus Twelve Warren was working with Fielding on the evacuation of injured from the escape area when she said suddenly, “I don't like what the Escape has done to some of the people here, sir. I especially don't like what it has done to you. In my opinion you should slap an indefinite hold on it—with a series of small delays to begin with, of course, so as to allow the Committee time to unwind—and start work on an alternative solution. It would be much better, sir, to found a dynasty . . .”

If there had been anyone else present Warren would have silenced such seditious talk at once, but they had known each other and served together so long that all he could do was grunt disapprovingly.

"On *Victorious* I was the only unmarried female officer," she went on seriously, apparently changing the subject. "As an unattached female who was also well-stacked I kept the other girls from taking their men too much for granted—potentially I was the Other Woman for the whole ship—and as the doctor-psychologist, again female, I served many of the functions of a mother as well. You, sir, with your absolute authority combined with the ease with which you could be approached, not to mention the concern you displayed for the safety of the officers serving under you, were the great grand-daddy of all Father figures.

"Even in these decadent times," she went on, holding his eyes steadily but with her face growing redder by the second, "mothers and fathers are not infrequently married. To each other, I mean . . ."

Warren gaped at her, unable to speak.

"This, sir," she said, lowering her eyes, "is not a rhetorical proposal."

A part of Warren's mind seemed to be chasing itself into a tight circle of confusion while another and less chaotic segment remembered a sunlit observation platform in their first post. On that occasion Warren had considered long and deeply this alternative solution, and rejected it as being too uncertain. One of the reasons then for its rejection had been his own advanced age, but this particular reason no longer seemed quite so valid after three years of healthy, open-air and virtually primitive living conditions. Those same conditions had done a lot for Ruth Fielding, too, Warren told himself, as he tried not to look directly at her tight bolero jacket and even tighter pants, although in her case it was an improvement on near perfection.

He had to remind himself forcibly that the no longer valid reason had been a minor one in any case, and that all the other reasons still stood.

"I'm pretty sure the Escape will succeed, sir," she went on suddenly, "but I wonder sometimes if our people back home are really capable of mounting the rescue operation. I realise that you are more aware of the overall tactical situation than any of us here, but your information is three years old and—"

"We have to escape!" said Warren harshly.

Until she had begun to talk again Warren's mind had been very far away indeed from the Escape. He had been thinking that aboard *Victorious* some things had been neither possible nor desirable. A female ship's Doctor-Psychologist was normally kept too busy seeing that everyone else was happy to have any time to feel unhappy herself—if the officer was as dedicated as Fielding, that was. And while ship marriage was the norm on active service, it was not supposed to be entered into between such widely disparate ranks as a Major and a Sector Marshal! In order to attain such eminence, an officer had to devote all his mental and physical energy to his career, and it was assumed that sheer force of habit would see to it that he continued this devotion to duty when the pinnacle of power had been reached. A Sector Marshal might very well be approachable and democratic and go through all the motions of being just one of the boys, but a girl might just as soon think of marrying God.

On the prison planet, however, the situation was not the same as aboard ship. Here a King could look at a sex kitten . . .

It was the sudden and surprising violence of the temptation, as if her words and her warm, vital presence had triggered off an emotional time-bomb within him, which had shaken Warren so badly and roughened his voice. That and a terrible growing suspicion.

Still looking at the table top, she went on quietly, "A female psychologist indulging in self-analysis on the subject of love is probably more than you can bear, sir. So let's just say that I've taken so many men apart mentally that my need is for one with very special qualities and attributes, one that I can truly look up to. One of these attributes need not necessarily be youth."

"Major Fielding . . . Ruth . . . !" began Warren, and stopped. When he went on a few seconds later he tried to adopt an avuncular manner, but his voice was so strained that he hardly recognised it. He said, "I think I've just been handed the nicest compliment of my whole life, Ruth. But what you're suggesting isn't possible. You'd be much better advised using your feminine wiles on Hutton, who spends more time looking at you during Staff meetings these days than anything or anyone else . . ."

When Major Fielding left a few minutes later her face had been stiff and unreadable. The thought came to him that perhaps she had been telling the truth about her feelings towards him, but he suppressed it with a violence which was close to panic. It was much better to think the other way, that he had just foiled the third and potentially the most damaging act of sabotage yet attempted.

The thought should have brought him joy . . .

On Minus Ten he had to read the riot act to Major Hynds who had been complaining bitterly that his job was strictly third leg, and tell him in no uncertain terms that it was vital that the prisoners were not allowed to forget any of their technical know-how—or anything at all, for that matter.

He sent Hynds on a five-day trip to the other continent to check on the re-education programme on the same day that he sent Hutton off to check on practically everything else. If either officer suspected that he was pulling the old divide and rule gambit on them—splitting them up so that they would have no chance to unite in opposition to Kelso, Sloan and himself—there was nothing they could do about it. Major Fielding was angrily co-operative, and Warren could not be sure whether it was the anger of a woman scorned or a conspirator foiled.

On Minus Eight he made it known for the first time that Majors Hutton, Hynds and Fielding would take no actual part in the assault, citing as his reason the necessity of leaving behind a nucleus of technical brains for a second attempt should this one fail. In his best dour old warrior's voice, he said that he was banking on this one succeeding, and if it didn't he could not bear the thought of having to do it all again.

The news that he intended going up with them gave a tremendous boost to the morale of the assault groups, although when Fielding heard about it her anger towards him became overlaid with a quality which Warren suspected was clinical appraisal.

On Minus Seven the assault groups went gradually on to a low residue diet, as far as was possible with locally grown food, and they went off alcohol completely. Warren had let them know in no uncertain language that he didn't want to go storming any ramparts with officers who were blind drunk or hung over. Six and Five he spent chiefly in reassuring officers

of various ranks and specialities that he *did* know how to handle himself in one of Hutton's waste-baskets, that, having listened to the same lectures as they had, he was familiar with Bug physiology and the layout of their guardship, and that he was not contemplating any stupid heroics because he was getting too old and stiff. In short, he told them, he did not intend taking any risks and he was simply going along for the ride.

When they heard that, some of them tried to tell him how they felt. Awkwardly—even Kelso stumbled at it and Sloan was actually shy—they told him that he had done some highly peculiar things, almost suspicious things, in the past, but they knew now that he was with them and they were with him, no matter what. But the way they looked at him while they were talking made Warren feel even worse, because he had never been completely honest with any of them at any time.

In the late evening of Minus Four a top priority signal arrived from one of the observation posts on the eastern tip of the continent, which was already in darkness, saying that a Bug ship of the cruiser or small transport class was locked on to the guardship. It had arrived during daylight when the guardship was above the horizon and hence invisible from the ground. Then four hours later, although both ships were by then well within the planetary shadow, the tail-flare of the cruiser illuminated the scene as it pulled away from the guardship preparatory to going into hyperdrive.

There could be no doubt as to what it all meant.

"What a blasted inconvenient time for them to land prisoners!" said Kelso, considerably understating Warren's own feelings in the matter. He added, "If they follow usual procedure, sir, we can expect the shuttle early tomorrow morning."

Warren said, "It would help to have some up-to-date intelligence about the crew and organisation of the guardship, and the war, too, of course—but not if it means a Hold to get it. See that the prisoners are rounded up and interrogated as soon as possible, Lieutenant."

The Bug shuttle landed on Minus Three at the time, but not in the place, expected. It used exactly the same landing spot as had been used on its previous visit, and it delayed several minutes so that the new prisoners could get clear of its

tail-flare before it took off—a clear indication that the Bugs were growing careless or else feeling less nervous about the possibility of an ambush by prisoners. Either way it was to Warren's advantage. The new arrivals were contacted and the position explained to them in double quick time—all except one, that was.

Hynds, back from the other continent and somewhat happier now that he had Intelligence work to do instead of acting like a glorified school inspector, made the report.

"It's difficult to process the men properly in the time allowed, sir," he said briskly, "but it seems clear that they are no great shakes mentally, unobservant to an amazing degree and shockingly uninformed regarding the overall tactical position. The forty-three prisoners landed represent the survivors of thirteen ships and actions fought over a period of three years, and many of them have spent this time being moved about from ship to ship as if the Bugs did not quite know what to do with them. From this we might infer that the Bug military organisation is beginning to go rapidly to pieces, and I'm sure the missing officer would corroborate this if we could find him."

"I'm told that he is some kind of psychologist," Hynds continued, "and that he outranked the Captain of his ship, which was a heavy cruiser. I've had gliders and search parties out since the guardship set, but we haven't found him."

"Fleet Commander Peters," said Kelso suddenly, "has his farm in that area."

In spite of himself Warren laughed. "I don't think the Commander could do much to stop us, Lieutenant. Not with one convert, in three days . . ." He turned abruptly to Hynds. ". . . Better call in the search parties and gliders, Major. If he hasn't heard all that whistling and drumming or seen a plane and made a signal to it, a stray battler must have got him. And would you pass the word to Major Hutton—I think he's in number Two Attack Point—to meet me at the grenade store in forty-five minutes . . ."

Three. Two. One . . .

Ponderous, faultless and by now unstoppable, the vast machinery of the Escape rolled on. Holding as it did a thirty-two-and-a-half hour orbit, which was the rotational period of the Bug home world, the guardship was below the

horizon for just over sixteen hours. But in actual fact the Committeemen had closer to nineteen hours freedom from observation because they had been careful to choose for their surface transport, routes which were well-sheltered by natural features—nearby hills and mountains, dense forest and the concealment afforded by the guardship's acute angle of observation through the atmospheric haze. At the present time, four hours after sunrise on E-minus One, the Bug ship was due to set in a little over three hours. In a very short time—Warren had to allow for possible delays in transmission—he could signal the final Go.

From Nicholson's post, which was almost deserted now since it, too, was due for destruction, the town and bay looked peacefully and unremarkably busy in the early sunlight. But there was a growing commotion outside his office, with voices raised so loudly in argument that two of them were recognisable. So he was not completely surprised when Sloan conducted Fleet Commander Peters and a stranger into his presence.

"I expected to find you at the escape site," said Peters breathlessly, while Sloan was still opening his mouth. "We've wasted far too much time. I've got to speak to you, sir. Alone . . ."

Warren did not reply at once. Instead he examined the stranger from head to toe, seeing a small, overweight individual with a furiously sweating face, whose expression reflected anxiety and confusion. Remembering his own feelings on being first pitch-forked into the Committee-Civilian ideological conflict, Warren felt a touch of sympathy for the man, but it was a very light and fleeting touch. He nodded for Sloan to wait outside, then turned to Peters.

"Go ahead, Commander," he said.

Peters had recovered his breath but for some reason seemed to be finding it difficult to speak, and his eyes as they met Warren's held an expression which was very close to pity.

"I'm afraid you'll have to call it off, sir," he said finally. "You've no choice. The war is over . . ."

seventeen

" My name is Hubbard, sir," the new man put in in a nervous jerky voice. " Political Officer from the late *Resolution*. It isn't over, exactly—but it amounts to the same thing. Neither side has the resources, technical, material or personnel, to go on with it !"

" Political Officer ?" asked Warren dully. It was a completely new rank to him, and even though he felt that the planet had just been pulled from under his feet the process of satisfying his curiosity was automatic.

The position had been created because of the growing distrust of the field commanders by the High Command, Hubbard explained, the situation being aggravated by the accelerating breakdown of all military organisation and communications. In part this was due to the incredibly poor quality of present officer material, it being the accepted thing these days to refuse rather than to force battle with the enemy. The men just would not fight—although in honesty Hubbard said that this was due to distrust of their own ships and equipment as much as inner qualms. Despite this, the officers on space service had been built up as heroes by home propoganda in an attempt to boost the war effort, and this had given some of the field commanders a very nice idea.

Not just as single ships but in flotillas and whole Sector sub-fleets they had simply opted out of the war, but they had not gone home. Instead they had taken themselves to some of the colony worlds—planets with small populations and light defences—and as heroes placed their worlds under their protection. Or held them to ransom, or tried to carve small, personal empires out of them, depending on the characteristics of the commander concerned and the number of units he possessed whose captains were personally loyal to him. It was Hubbard's duty, and the duty of the other political officers serving with the remains of the fleet, to constantly remind the ships' personnel where their true loyalty lay, because not only the military organisation but the whole of Earth's interstellar culture was rapidly falling to pieces. And it was no comfort at all to know that the Bugs were having the same trouble . . .

". . . The Fleet Commander has told me what you're trying to do and I think it's tremendous !" Hubbard rushed on.

" But it is a complete waste of lives and effort, sir, believe me. What remains of our military organisation is scarcely capable of mounting an offensive patrol much less a rescue operation for the rest of the prisoners ! You've got a nice tight organisation here, sir. You'd be better advised to stay put and—"

" Peters," said Warren suddenly, " how many people know about this ?"

The Fleet Commander smiled. He said, " Give me credit for a little intelligence, sir. Nobody but ourselves. Releasing it to your people in their present frame of mind would not be smart. I thought you had better handle it, break it to them gently after a long series of Holds . . . "

" Sloan !"

The Major charged into the room, his cross-bow unslung and ready, eyes glaring. Harshly, Warren said, " Put these men under close arrest. They are not to be allowed to speak. They are to be confined separately so that they cannot attempt subversion by talking to each other and allowing their seditious talk to be overheard. They are not to say " Good Morning " or " Thank you " when meals are served. If they utter one word they are to be killed."

" Yes sir !" said Sloan.

" You . . . you can't," began Peters incredulously. " You're mad, power mad . . . !"

The words were choked off as in response to Warren's nod Sloan brought up his weapon, aimed at the centre of the Commander's forehead and pulled the trigger. The bolt thudded into a log two feet above the Commander's head because at the penultimate instant Warren had used the heel of his hand to jar the Major's elbow.

" You are not to speak at all," he said quietly. " Is that understood ?"

It was understood.

Second thoughts and last minute changes of plan were dangerous, Warren told himself firmly, and a decision taken calmly and unhurriedly should not be altered because of them —especially if they arose because of cowardice, selfishness or the possibility of taking an easy way out. But he gave the final Go signal within minutes of Peters and Hubbard being marched out because he did not want to give himself time to think anyway . . .

The last few yards of the main tunnel was opened to the surface while the wooden framework of the dummy was going up around it. These massive, hoop-like timber sections—prefabricated, numbered for ease of assembly and stored in town many months previously—were rushed out to the Escape site by gangs of as many as twenty men to each section. Their route was a straight line from town to the site, but no attempt was made to conceal their tracks in the soft earth because it would later be burned over to look like the scar of a C-7 blast. While the framework was being assembled, at a pace which could only be described as furious despite the frequent measurement checks, smaller parties were carefully setting light to the farmhouse which was supposed to be burned by the force-landed ship and to the trees and undergrowth sheltering the two forward attack points.

These positions had to appear to be razed to the ground, but at the same time the scorched tree-trunks, bushes and log walls had to give concealment to a large number of men. While this carefully supervised destruction was going on, survey teams with mirrors, flags and extremely loud voices were checking on the alignment of trees in the sections due for burning. Some were marked for fire-paste and others, those nearest the site, to be blown down with explosive while literally thousands of small trees and bushes had sheets of paper impaled and tied on to a conspicuous branch in such a way that they would burn off but not blow off in a wind, and these were to be ignited by torch.

Simultaneously the grass and brush and the more inflammable species of tree along the edges of the fire lanes were being wetted down with water carried from the bay, the marsh or the nearby stream. Some of it had to be carried, in great hide gourds slung on poles, for more than three miles.

On no account could the conflagration so soon to take place be allowed to get out of control, to look like an ordinary, naturally occurring forest fire . . .

Through the smoke haze from the burning farm the helio on Nicholson's post blinked out a constant stream of progress reports. The dummy's lock section had left its mountain and was half-way to the coast. The stabilisers were twenty minutes behind it. The last of the hull sections had left Hutton's Mountain. Weather forecast was for no change in

wind velocity or direction, but there was a possibility of cloud around dawn.

Hutton was having trouble with a temperamental battler at the head of his convoy and was twenty-five minutes behind schedule. Hutton had turned the battler loose and was having its load pulled by the extra men he had brought along for just this contingency. The lock sections had been loaded on to their cat and it was at sea, winds favourable. Hutton had picked up ten minutes by Johnson's bridge, and it was observed that he was helping pull the lead wagon.

A small cat fleet had rendezvoused at Chang's inlet and the smaller metal sections dispersed among the cliff caves there were being ferried out to them. One of the boats had capsized in the shallows. Its loads had been dragged ashore and transferred to another boat—estimated delay forty-five minutes. The first cat was hull up on the horizon. The head of Hutton's convoy was now five hours away . . .

The helio stopped blinking because the sun was suddenly down among the trees. There was perhaps an hour of usable dusk left, then the remainder of the work would have to be done by torchlight. The signals were resumed, using a focussed oil-lamp and shutter. With a red-orange light which gave overtones of anger to everything it said, Nicholson's post gave the news that the guardship would rise in eight hours and seventeen minutes . . .

By the light of bonfires and strategically placed torches the lock and stabiliser sections were fitted, the tanks of Bug air were brought up and positioned inside the framework and the periscopes were set up and aligned. The vanguard of Hutton's convoy came rumbling and creaking on to the escape site, off-loaded hurriedly because the fires were making the battlers restive, and returned to town. While their loads of metal plating was being lifted, manhandled into position and hung on to their proper place on the framework, the empty wagons were reloaded with furniture, personal possessions and litters for the injured, and driven to the other side of town where they were parked by the roadside. There they waited, just as the cats in the bay were waiting—although in their case the furniture and sundry oddments were carried mainly to break up or hide the outlines of the deck cargo of dismantled gliders and similar items too valuable to be destroyed with the town.

It was like a scene from some surrealist's Hell, with red-eyed, smoke-blackened demons aswarm over an alien and uncompletable jig-saw puzzle in three dimensions. But they were completing it—all the pieces had reached the site and smooth metal flesh was growing across the bare bones of the dummy. And so far everything had gone without a hitch.

Something should go wrong, Warren felt, something serious. But nothing did.

Men fell or burned themselves with torches or had heat-stroke or had members crushed during the process of assembly or while unloading wagons. They were taken to the hospital in town and then to the litter wagons. But these were only minor hitches, the ones which had been planned for. Just as the fact that they were still a little behind schedule.

"The discharge of a C-7 is detectable at line of sight," Warren said worriedly and unnecessarily to Hutton. "We have to light the fires at least an hour before the guardship clears the horizon or they'll know it isn't the real thing."

"Just three more sections to go, sir!" said Hutton, the smoke, excitement and the strain of too much shouting all contributing to the hoarseness of his voice. "They're at ground level and won't give much trouble, and we'll have them in position before the heat and smoke gets too bad. So you can give the signal now, sir . . .!"

Hutton's face and body were so thickly caked with soot, sweat and grime that he had the aspect of a piece of smoke-blackened sculpture, but the excited, shining eyes and the even brighter gleam of teeth were not the expressions of a thing of stone. Grinning in return, Warren slipped the lanyard of his whistle over his head and handed it to the Major.

"*You* give the signal," he said.

There was a moment of absolute quiet after the high, clear note of the whistle sounded, then the silence was broken by more whistles, shouted orders and sporadic cheering punctuated by the thud of explosions and the angry hiss of fire-paste. At a few widely separate points around the site a red glow showed through the trees, a few sparks drifted into the air, but as yet there was not much to see.

"I want to get a better view of all this," Warren said briskly, turning to enter the dummy. He paused, patted the smooth metal plating beside him and added, "You've done a

good job, Major, a very good job. When assembly is complete, leave—there's nothing more for you to do here. Go help Fielding with the road evacuation, she might want you to pull a wagon or something. And, uh, look after her, Major. Give us time to reach the guardship, then . . . Well, what you do after that depends on circumstances, but whatever happens you are going to have an awful lot to do."

"I understand," said Hutton in a low voice. His eyes were not shining quite so brightly and his teeth did not show at all. He went on, "If you don't . . . I mean, I can't be sure that I can organise a second Escape. The way things are at the moment, sir, I couldn't promise—"

"And I wouldn't want you to, Major," said Warren meaningfully, even though he knew that at present the meaning was lost on Hutton.

"Good luck, sir," said the Major.

Warren went through the opening in the dummy's hull, around or under the timber braces and into the mouth of the main ambush tunnel. The compartments opening off it were full of men checking weapons or airtanks or just sitting quietly beside their spacesuits. One of the rooms, the testing compartment, was full of deep and very muddy water and another was festooned with, as yet, unclaimed spacesuits, one of which was his own. At the other end of the tunnel the road was becoming well-lit by the growing number of fires, and he made good time to the town and to the harbour. The glider refused to unstick from the water until its rockets were almost burned out and they made only five hundred feet, but by then there was no dearth of warm updraughts of air to help them.

A very fine man, Major Hutton, Warren thought, the type of personality and mind which should be preserved, no matter what the cost! The thought gave him a little comfort, although it could not make him completely sure that what he was doing was right.

From two thousand feet the scene resembled a tremendous wheel of fire whose hub was the blunt torpedo shape of the dummy and whose spokes radiated in lines of burning trees and vegetation to the Post, to the many farms up the valley and to the town. Around the site the greenery gave off much smoke and burned with a loud frying sound, but most of the spokes radiated towards the town, and here the wooden buildings were

dry and roared and they burned and hurled clouds of sparks half a mile into the air.

It looked both spectacular and highly artificial. Satisfied, Warren tapped his pilot's shoulder and they dived through smoke and sparks towards a landing in the bay.

They put Warren into his suit then. After the freedom and comfort of a kilt, the battledress part alone felt hot and constricting, and when they fitted the wickerwork shield, helmet and air-tanks he felt even worse. As respectfully as possible in the circumstances, they held him head downwards in the muddy pool of water so that they could check the seal between issue battledress and home-made helmet. He was dunked three times before he was able to tell them where the water was coming through.

A wide leather strap laterally encircled his head and served to anchor a large sponge pad to his forehead. A second strap going around the top of his head and under his chin held the first one in place and gave support to yet another strap, a thin one this time, which crossed just under his nose. To this one was attached a thin, hollow cane, and when they took him out of the pool and laid him face down he worked his lips about until the cane was between his teeth and then drank the muddy water. There was about half a pint of the stuff.

Water inside the helmet during weightless manoeuvring could be deadly, and drinking it was the only way of getting rid of it. He was helped to his feet, motioned to crane his neck forward so as to wipe away the remaining droplets with his forehead pad, then assisted towards the dummy along the tunnel which was now lined with spacesuited figures resting against nearly vertical planks. Their eyes followed him as he passed, caught by the big numeral '1' painted on his wicker-work shield, and under the ludicrous nose-strap and drinking straw gadgets their teeth showed in a smile.

Warren stopped long enough at each one of them to tap out "Good Luck" against their face-pieces, show his own teeth and wag an admonishing finger if any of them started to come to attention.

Kelso and Sloan were already in the dummy, propped in their wooden supports near one of the periscopes, waiting. Warren joined them.

eighteen

After having had the fires under observation during darkness, when they would have been seen to the best advantage, and having drawn certain conclusions from these observations, it was expected that the Bugs would send down a probe for a closer look. Instead of a quick dive in and out of the atmosphere, which was the usual procedure when investigating any suspicious occurrence, it was expected that curiosity would make them soft-land the probe for a really close look. It was known that if the vehicle was landed it would not have enough fuel left to return to the guardship. Being an extremely valuable piece of equipment, the Bugs would not soft-land it in the first place unless they expected to get it back. The only way they could do that was to bring it back aboard the shuttle, and if they considered landing the shuttle they could not be feeling too suspicious.

The probe arrived about two hours before noon. On the way down it had a perfect view of cats hurrying out of the bay, many of which were towing rafts ; of the refugees on wagons and afoot, well advanced along all the roads leading from the town ; of the town itself, devastated and still burning in many places, its gutted corpse hidden by a filthy shroud of smoke. It could see the acres of smouldering tree stumps and vegetation, and the highly-unnatural outlines of the destruction which proved that a weapon designed for use over a range of thousands of miles of vacuum was capable of wreaking considerable havoc despite the blanketing effects of atmosphere.

It noted the ship crash-landed and toppled on to its side, observing and relaying back the fine details of the buckled stabiliser which must have given on landing, the partly open airlock and sprung plating which steamed faintly with escaping chlorine, and the slit in the nose where the C-7 blister hadn't closed properly. And there was the smoking remains of the farmhouse close by, whose occupants were no doubt the indirect cause of the surrounding devastation, which had been set on fire by its tail-flare.

So far the data was simply corroborative material for the telescopic observers in the guardship, but suddenly the probe opened out like a flower with super-sensitive vision, sound and analysis equipment, in effect subjecting the area to a microscopic as well as a telescopic examination.

Such an examination could not be allowed to continue.

A lone figure came staggering out of a patch of unburned vegetation some fifty yards from the probe. His body was terribly burned and bleeding from wounds inflicted by sharp branches, even his leather harness was charred and cracked by the heat, and from his mouth there came a steady, high-pitched moaning that was like a continuous low scream. He carried a club in the shape of a heavy table-leg, and when he saw the landed probe he screamed harshly and came stumbling towards it.

In actual fact Briggs was suffering no discomfort at all. His ghastly appearance was due solely to imaginative make-up, his club was a very carefully fashioned table-leg weighted and balanced to inflict the maximum damage, and he had landed one of the easiest jobs in the whole operation, simply through his acting ability. He was supposed to disable the probe so that the Bugs would be thrown back on to the resources of the telescopes on the ship and their own unaided eye-sight when they landed later—if they landed later. So dutifully, almost gleefully, Briggs set about battering the probe into scrap, hammering the part of a poor, pain-crazed prisoner for all he was worth.

He must have been a little too enthusiastic in his use of the club. The battering must have opened a path between the Probe's fuel tank and the still red-hot venturis. There could only have been a few ounces of fuel remaining in the tank, but it was enough. There was a sudden flare, a concussion which made the whole dummy jerk around him, and when he reached the periscope Warren could see that there was very little left of Briggs or the probe.

Warren settled back for another period of waiting, and thinking.

Vitally important, but safe, was how Warren had described the assignment to Briggs. The probe should be given just enough time to report on the desolation around the site, the absence of any possibly dangerous groups of prisoners, of harmful activity, of anything except burning, smouldering vegetation and a ship which had crash-landed and was leaking chlorine. Then it would have to be disabled so that the small sounds made by the hidden assault groups would not be picked up. It was not expected that the Bugs would booby-trap the probe, since it would be much simpler to drop a bomb on the

area if their suspicions were aroused. Briggs had agreed that all this was so, and his expression had reminded Warren of the time when this same Briggs had shown him how to swing a hammock where the battlers couldn't reach it and Warren had nearly hung himself on the safety rope—the expression of a man trying hard not to laugh . . .

The time dragged past and the sun beat down on the site and on the metal dummy. Inside the dummy the heat was unbearable and inside the suits it was even worse. Kelso, Sloan and himself were now lying prone with a suit technician attending each of them. The technician had removed the gauntlet sections of the battledress and placed their hands in small pans of water, indicating that they should lift them in and out at intervals. He also kept wetting down the accessible portions of their fish-bowls. Evaporation from their hands and helmets was supposed to cool them and avoid heat-stroke, but Warren was convinced that the water treatment's effect was chiefly psychological.

Above them, invisible in the sunshine, the Bugs should have made their decision—the only decision possible to them if they had any decent feelings at all. The accidental destruction of their probe should not have aroused suspicion, considering the circumstances, and the shuttle should already be on the way down to rescue the survivors of the crash-landed ship—some of whom *must* be alive to judge by the devastation surrounding it ! But something *might* have made them suspicious, or perhaps they were too cowardly to send a rescue party, and a missile was on the way down instead to ensure that one of their ships did not fall into the hands of the prisoners . . .

Suddenly the suit technician waved and pointed upwards, but it was not until Warren reached the periscope that the sound of the shuttle coming down got through his helmet. He didn't see the landing because of the smoke and ash being blown through the gap in the plating where the periscope was set up, but he could tell that it was very close, and the elation he felt was due only in part to the beautiful way things were working out. A contributory factor was his knowledge that, not soon but in the foreseeable future, he would be able to get out of the pressure-cooker he was using for a spacesuit !

The clouds of smoke from the many small fires started by the landing served to hide the movements of the ground assault men, from the eyes on the ship as well as those in space, as they took up their positions in the unburned cover around the edge of the escape site. Some small trees fell, stirring up more smoke. In actual fact they were being pushed over and damp grass and twigs at hand for the purpose were being used to produce the smoke—the idea being to accustom the Bug rescuers to falling trees and sudden, dense clouds of smoke.

They might be frightened by these effects, but the whole area was smouldering and constantly being re-ignited by sudden puffs of wind—or strategically placed Committeemen aided by fire-paste and the wind—so that they should not be suspicious of them. When the smoke was allowed to clear temporarily, the shuttle could be seen standing about one hundred yards from the dummy with the burned farm-house almost directly between them.

It wasn't an ideal position for the ambush, Warren thought, but it could have been much worse.

With gestures which were an improbable combination of salute, cheery wave and thumbs-up sign, Kelso and Sloan disappeared into the mouth of the tunnel heading for Number Two Attack Point, which was very nearly to windward of the shuttle's position and from which the main body of commandos would be able to approach the ship under cover of smoke.

At Warren's signal the suit technician stopped pouring water over him and began pounding on the interior of the metal hull with a piece of wood. It was a slow, irregular beat, not very loud but still capable of being heard all over the escape site, and it was the sort of noise which might very well be made by someone trying to attract attention when radio or other means of communication was impossible. That would be how the Bugs in the shuttle would regard it, Warren told himself. Later, if the pounding should vary in beat or volume they should regard it as a sign of impatience or desperation on the part of the survivor and not as instructions going out to the assault groups via drum-talk . . .

The shuttle's lock swung suddenly open and the ladder with its oddly-shaped rungs and stubby handrail came telescoping down. A billow of smoke from the fires behind Number Two rolled past the enemy ship and when it cleared there were two

Bugs on the ladder. A few seconds later there were four, all descending as quickly as was possible for that particular life-form to move. Excitement as well as heat made Warren's mouth go dry.

They intended making a fast rescue. That much was plain from the speed of their descent and the fact that the cargo lock remained sealed—they weren't going to break out one of their ground vehicles. And the normal crew of the shuttle was three. Counting the one they must have left on radio watch there were five beings in the rescue party, which was a further indication that they suspected nothing or they would have not risked too many at one time. But the four Bugs moving away from the base of the landing ladder were armed—they might not be suspicious but at the same time neither were they stupid. In addition they carried metal-cutting equipment and packs which probably contained medication of some kind, all hung from the lightweight type of suit which gave the maximum amount of physical mobility with, as was usual with such suits, the minimum of physical protection. All at once Warren felt sorry for them.

From the Bug point of view this was simply an errand of mercy, but one which required a considerable amount of intestinal fortitude to carry out. To eyes accustomed to much higher light intensities, the escape site must appear a very spooky place. Even though the sun shone through an obscuring haze of smoke, the light was not good. All around them the ground smouldered, rendering objects and distances uncertain in what must appear to them to be a hot and foggy twilight, and when a large cloud of smoke drifted past, their visibility would drop to a few yards. People who would subject themselves to such conditions, even for a few minutes, possessed qualities which Warren could admire. It was a pity that these admirable qualities would serve only to get their possessors killed in a few minutes from now.

Warren signalled again and the technician gave the hull a single, solid blow which made the interior of the dummy ring like a discordant gong. In the distance there was the crash of falling trees and the soft crackling of fires, both too far away to seriously frighten the Bugs. Behind Warren the smoke aimed at screening the site from the guardship's telescopes, which at that time were thirty-two degrees above the horizon

with a thickening atmospheric haze to penetrate in addition to the smoke pall, rising like a thick, blue fog.

At the same time Number Two were busily making smoke which rolled slowly towards the shuttle, billowing upwards as it came to drift past the control-room ports high in the ship's nose. At ground level this smoke appeared to be clotted here and there, but even to Warren's more sensitive human vision the wavering indistinct shadows did not at all resemble a slow-walking file of men.

One to get ready . . . he thought.

As a species the Bugs were six-limbed and insect-like, but lacking in the protective carapace or exo-skeleton developed by many Earth insects—they were the type of bug which squished rather than cracked when it was walked on. Their bodies seemed altogether too soft and heavy for their four walking legs, mainly because of the high liquid content of their systems and the fact that the movement of each vital organ or muscle was reflected as a constant twitching and bubbling of their semi-transparent tegument. But they were in no sense physical weaklings.

Their two manipulators which projected forwards from each side of the head section, which in turn was connected to the main body by a short and ridiculously thin neck, were both sensitive and immensely strong. The manipulators, mouth and general sensory equipment which was housed in the head section had the hairy, frond-like appearance of something which might have been grown under the sea. Not all of these physical details were visible as the four Bugs rounded the farmhouse, but because they were wearing the equivalent of the tight-fitting service battledress there was very little hidden.

Two to get set . . .

The second gong-like note made them hesitate, as did the realistic collapse of one wall of the farmhouse with the accompanying dense smoke. But they came on, their bodies wobbling like water-filled balloons in their haste, their head sections swaying heavily from side to side. Behind the dummy the smoke was rising so high and becoming so thick that the whole escape site was darkened. The Bugs were now hidden from sight of the shuttle by the ruined farmhouse. They came to a halt before the dummy's airlock, and one of them suddenly began to move away again, obviously intending

to have a look at the other side of the mock-up. Warren made frantic chopping motions with his hand.

. . . And three to GO !

The reverberations of the final signal and the subsidence of more wreckage from the farmhouse both served to keep Warren from hearing the twang of cross-bows from the farmhouse, from points all around the site and from positions further along the interior of the dummy. It seemed suddenly as if the four Bugs had grown bristles—thick and very short bristles, because the bolts had penetrated deeply. They rolled over soggyly and lay still, leaking the yellow stuff they used for blood and which turned black within a few seconds of being exposed to the oxygen-laden air.

Warren swung away from the periscope and hurried carefully towards the airlock, thinking that if the four Bugs had made any noise as they died, which was very unlikely, the one left aboard the shuttle might put it down to a cry of surprise at the sudden cave-in of wreckage, some of which might have fallen too close for comfort.

The Bug in the ship could not suspect anything yet, but it would require only a few minutes of not being able to raise its friends on their suit radios for it to become very anxious indeed. What happened after that depended on how well the Bug could see, how easily it became confused and, most important of all, how many fine and admirable qualities it possessed.

The dummy's airlock dropped open and Warren went through it, running.

n i n e t e e n

Because the dummy was supposed to be lying on its side the lock's outer seal formed a short, steep ramp to the ground. Warren stumbled going down it and the sweat of fear was mixed briefly with the super-heated perspiration already bathing him as he thought of the possible effects of a fall on the too-brittle seals of his helmet and air-hose. But he recovered balance and ran carefully into the smoky sunshine of the site, rounding the farmhouse on the side opposite that used by the Bug rescue party and heading for the tall shadow in the smoke which was the shuttle. He was not running much

risk of being seen because the Bug on watch, if it could see anything at all in the smoke, would be watching the place where its friends had last gone from sight.

Most of the assault force was already in position, packed tightly into the small circle around the ship's stern which was hidden from the control-room by the bulge of the hull. A few feet above their heads the flaring mouth of the main venturi still glowing red, was a stark reminder of their fate should the Bug upstairs decide suddenly to take off. There were two figures already on the ladder, climbing rapidly and silently on padded boots—Kelso and Sloan were not wasting any time. Two other men, the pilots, were starting up the ladder as Warren reached it. He joined them, having to pull rank on the other commandos waiting to ascend by tapping a few helmets firmly and indicating the number painted on his shield. He mounted silently, although not as quickly as Kelso and Sloan, so that the only noise from the ladder was the regular tap, thump, tap-tap made by the Committeeman beating on one of the hand-rails with padded sticks.

Considerable research had gone into the development of that particular rhythm, which was the nearest they could come to the sound made by a six-limbed being slowly climbing a ladder. The Bug in the control-room should be really confused by that sound, since it had just seen its friends disappear towards the dummy and if any one of them had a reason for coming back it would have told him about it on the suit radio. The other possibility was that a survivor from the crashed ship had been wandering in the area and found its way to the shuttle, missing its four rescuers in the smoke. This was a pretty strong possibility, Warren told himself desperately and even if the Bug was frightened it would think twice about taking off and abandoning its friends and this possible survivor. At this moment it was probably asking the advice of its superior in the guardship about the situation.

The first bolas with its attached line whirled upwards past Warren as he climbed, closely followed by two more, to wrap themselves around the thin metal post and spidery antenna which projected from the hull a few yards above the lock. The weights on each bolas were enclosed in padded bags to ensure maximum silence in use, and the bolas with its attached line had been soaked in a super-saturated solution of CuSO₄ until a few seconds before it was needed, and the other

end of the wetted lines were being grounded in equally wet earth.

Copper wire fine enough to be woven into a rope was beyond even Hutton's present resources, so that water and copper salts had had to serve instead.

The three lines tightened suddenly and Warren saw the antenna support quiver, bend slightly then sag until it was lying almost flat against the hull.

If everything had worked as it should, the cutting off of communications between guardship and shuttle should not have been a dramatically sudden or frightening occurrence. There should have been a gradual fading of signal strength followed by a complete fade-out as the bolas first grounded the antenna and then pulled it off target, and the whole thing would be attributed to malfunctioning equipment—the other person's equipment, of course. They should not be suspicious, Warren told himself as he reached the top of the ladder, not yet . . .

The lock chamber was a large compartment extending deep into the ship, a three-way lock opening into the prisoner accommodation as well as the Bug-inhabited section. It allowed POWs to be disembarked without having to contaminate the whole ship with oxygen or letting the prisoners retain their complete spacesuits. The ship could carry up to one hundred prisoners in four closely-spaced decks connected by a ladder running up through a central well, so that the top two decks and the entire length of the ladder was covered by the weapon mounted in the floor of the control-room. This was an unsophisticated but very effective affair firing solid projectiles only, since anything more devastating might have blown the stern off the ship.

The other seal opened into a companionway leading to the control-room, but in a series of flat zig-zags which was more comfortable for climbing by the ungainly Bug life-form. The two pilots were standing beside the Bug seal, and Warren joined them so as to avoid blocking the assault men who were silently following him up the ladder. Sloan was quietly knocking the last of a series of wedges into the pivot of the outer seal with his fist. The metal wedges were padded for silence of insertion and for increased friction when in place. Kelso, a pouch of wedges tied to his middle, was checking the manual controls of the prison-deck seals.

In a war lasting as long as this one had it was natural for both sides to gain knowledge of how and why each others' equipment worked, there being an ample number of wrecks to study. It was normal practice on both sides to have a manual over-ride on all lock controls, a local control which in turn could be over-ridden only by an Emergency Lock, but once the seals were opened on local and wedged, the emergency controls would not be able to close them. The snag was that the operation of the manuals would show on the control-room tell-tales.

There were about twenty men in the lock chamber now, standing motionless and with their wickerwork armours making them look like grotesque half-vegetables in the garish blue light used by the Bugs. The man at the base of the ladder had stopped reproducing Bug footsteps and the occupant of the control-room would be expecting this Bug-that-never-was to open one of the seals. Being a survivor of the crashed ship, and hence unfamiliar with the purpose of the shuttle, it was likely that it would open the larger of the two seals, the one leading into the POW quarters.

Kelso opened the large seal and then sidled back along the wall to join Warren, Sloan and the pilots at the smaller one. The assault men crowding the compartment moved through and began to mount the ladder to the prison decks, their places being taken by men already on the landing ladder. In addition to cross-bows they carried bunches of long, thick canes which could be slotted and locked together to form a thirty-foot lance. With these metal-tipped lances it was hoped that the men could get high enough to damage the machine-gun projecting from the control-room blister, or even smash through the transparent plastic of the blister itself. It was possible, just barely conceivable, that they could storm the control-room with them. But the attack through the POW section was to be mainly diversionary . . .

It took about eight seconds after the large seal was opened for the Bug to react, then the machine-gun burped thunderously and two men crashed to the bottom of the ladder. One of them landed head first and he remained in that position, with one leg hooked around the fifth rung and his body held unnaturally stiff by his wickerwork shield, effectively blocking the ascent of the others.

An officer bent forward to detach him from the ladder and continued to bend forward until he was flat on the deck, splinters flying from his back as a stream of metal tore through him. The same burst sent another man higher up the ladder crashing to the deck, and somehow the first officer's body was no longer blocking the way. The men in the lock compartment pressed forward again. None of them got higher than the third rung.

But still the men came crawling up the ladder from the ground and pushing past him, as if eager to get to some wild and wonderfully exclusive party. There must have been twenty or more bodies around the base of the ladder now, twitching and writhing feebly as they died from their wounds or from chlorine passing through smashed helmets, or from both. Many of them were plainly dead and moved only because the weapon above gave them no peace, and the whole horrible, twitching mass leaked red, a red that was too vivid and garish in the harsh blue light to look like blood.

Warren found himself pounding at Kelso's arm with his fist and shouting—to no avail since the words were inaudible in the din outside his own helmet—for the Lieutenant to get on with it! But Kelso refused to move until he was good and ready, which meant the next time there was a sustained burst of fire from the control-room. When that happened the Bug's eyes would be on its weapon and not on the master panel, where the opening to the second lock would be registering. He stopped maltreating Kelso's upper arm and forced himself to look at the slaughter again.

Somebody had got the bright idea of going up the ladder two at a time, one in the normal way and the other on the inside where it projected a couple of feet from the wall. The man on the inside had the ladder's supporting struts to climb around as well as mounting the rungs, but it was a very good idea. The first time it was tried a very long burst indeed was needed to pick the inside man off the ladder, and Warren was suddenly aware that the seal beside him was open and Kelso was thumping a wedge into place.

They went up the zig-zag companionway fast, but carefully so as not to spring a leak in their suits—Kelso, Sloan, the two pilots and Warren trying hard to keep up with the younger men. They had to reach the control-room before the Bug had time to think, time to realise that its friends were dead, that

there were no survivors from a crash-landed ship and that the present attack was so well-timed that the whole thing had to be an elaborate ambush. They had to get there before it decided to hit the emergency take-off button. It could even wreck the escape by putting an Emergency Lock on the air-tight hatch leading into the control-room, by making it impossible for Kelso to operate the manual controls.

The hatch was wide open when they reached it, the big, circular cover standing at right angles to the control-room floor. Kelso banged home a wedge so enthusiastically that he overbalanced and just kept himself from falling by grabbing the edge of the opening with both hands. He was still hanging there and trying to get his feet back on to the companionway as Sloan carefully withdrew a heavily padded bag from his pouch and from the bag took even more carefully a large, lumpy ovoid of glass. The glass container held nothing more harmful—to humans, that was—than oxygen under pressure, and the glass was much thinner than that used in the suit air-tanks. He lobbed the glass container into the control-room, waited for five seconds and then went charging up through the hatch with one of the pilots hot on his heels.

There was a soft, red explosion in the region of Sloan's stomach and the Major folded violently in the middle and rolled from sight. The pilot toppled backwards a second later, his helmet and the head inside it blown open. The Bug up there had a side-arm, too, Warren thought sickly, of the type which fired explosive pellets. But the Bug had no business being alive, with an oxygen bomb bursting beside it . . . !

The second pilot was going up and Warren had to restrain him. He couldn't talk to the man, but by dint of hanging on to one of his arms and climbing above him he made the officer realise that the reason they'd had two pilots was in case one had an accident, and since one of them had had an accident the second pilot was no longer expendable. By the time the other was convinced of this Warren himself was part-way into the control-room and the Bug was shooting at him, but Warren was still covered by the upright hatch seal, which rang loudly with each hit of an exploding pellet, and he was additionally fortunate in that the Bug was trying to do two things and watch three places at once.

One of its manipulators held the side-arm, the other worked the machine-gun covering the prisoner well, while its head jerked heavily from the hatch to the machine-gun to the control panel behind it and back to the hatch again. A few feet from the Bug the oxygen bomb lay unbroken where it had fallen into the deep padding of an acceleration couch. Warren swore and flung his knife, but it didn't hit a vital spot and it landed handle first anyway. He backed away hurriedly, using the hatch for cover until a projecting metal cabinet gave him slightly more protection.

Kelso's head rose suddenly above the rim of the opening, and Warren began frantically drawing triangles in the air with his forefinger. Kelso's bewilderment was plain even through the small area of helmet not covered by his wicker-work.

A wedge! Warren screamed silently at him, trying by sheer telepathy to make the other understand. *Something hard and heavy to throw at that gas-bomb! A wedge, you stupid idiot—a wedge with the padding off . . . !*

Looking puzzled, the Lieutenant began knocking another wedge into the hinged side of the hatch cover.

Sloan was still moving. The Major was humping himself along the control-room deck like some grotesque snail, with agonising slowness, leaving a trail that was bright red rather than silvery. He was not moving directly towards the couch with the oxygen bomb on it or towards even the Bug, but was instead inching along a course which could only take him against the metal supports of the communications desk—perhaps he had no idea where he was going. Despite the tight fit of the battledress suits, chlorine must be already seeping into his helmet from the tear caused by the pellet, and the Major's abdominal wound was the worst thing Warren had ever seen in a life-time of war service. The Major was *dead*! Warren wished fervently that he would admit the fact and stop moving, but he did not stop until he bumped into the communications desk supports, and then he struggled and heaved weakly until he was on his side. Warren didn't see what he did then because for a few seconds he couldn't bear to look at him, but when he did look back Sloan was gripping one of the supports with both hands. With a sudden, convulsive effort the Major pulled the unprotected section of his helmet against the metal strut.

He must have opened his air taps because the contents of both his tanks went whistling out through his smashed helmet.

The Bug jerked back, dropped its weapon and began tearing at its gills. Warren climbed to his feet and snatched up the unbroken gas-bomb and smashed it with totally unnecessary violence at the Bug's feet. It shrivelled visibly, wrapped its six limbs tightly around itself and died. Major Sloan had finally stopped moving, but somehow Warren could not stop looking at him.

He became aware suddenly of a lance smashing through the machine-gun blister and of cross-bow bolts smacking off the control-room ceiling. Of the pilot checking the positions of essential controls, and of Lieutenant Kelso tearing the padding off a wedge and handing it to him.

Warren took it and on the nearest bulkhead he hammered out the signal "All Secure . . ."

twenty

The shuttle took off twenty-eight minutes after it had landed and twenty-two minutes after the four Bugs had died at the farmhouse. Close on two hundred men packed every possible space in the ship, the dead as well as the living. Speed had been the prime essential. The shuttle could not be allowed to stay concealed by the smoke for too long a time without the guardship becoming suspicious, so there had been no time to unload the casualties. The overloaded shuttle had staggered off the ground with an acceleration that was barely two Gs.

But the reduced acceleration should not in itself arouse suspicion, because on the site below the smoke was clearing to show the wide-open lock of the dummy and nothing moving for miles around. They might be worried by the radio breakdown—but the shuttle had, after all, been grounded for less than half an hour, which was a short enough time to conduct a rescue operation in dense smoke, and the slow ascent might well be attributed to possibly injured survivors being unable to take high G.

Warren moved his gaze from the viewport to the shattered machine-gun blister in the floor and through it to the men packed tightly on the POW decks. He was waiting for the next batch of casualties to appear and wondering if one of them would be himself.

There had been no time to free the wedged-open seals before take-off, and as the vacuum hardened around the climbing ship its atmosphere rushed out of the open locks. Chlorine was just as lethal to the human organisms as vacuum, but the drop in pressure would uncover any damage to the helmets or hose connections caused by the violent activity of the assault.

From Warren's position in the control-room the POW decks looked as if they were covered with an even layer of up-ended wastepaper baskets, and as he watched some of them began to jerk wildly, and there was a definite fogginess about the place. Warren gritted his teeth as he thought of those men slowly, or not so slowly, strangling to death while their friends within inches of them could do nothing to help. His feelings were so intense that when it became obvious that he himself was not to become a similar casualty, his relief was mixed with a definite feeling of guilt.

Acceleration ceased. For the next sixty-one minutes they would coast up to the guardship. There would be time to return the damaged antenna to its recess and remove the wedges from the outer seal of the airlock so that outwardly the shuttle would appear in all respects normal. Time also for the pilot to practise on the fine controls prior to making the actual approach, for the lock chamber to be cleared of casualties and for the men to get used again to weightlessness.

The escape site, Andersonstown and the smoke pall all around them shrank to a small grey smudge. In the blackness above, the guardship hung like a bright star.

Larger by far than the *Victorious*, at one time a first line battleship of a class which held the record of being the biggest mobile fabrication in space, the guardship was tremendously impressive despite its being forty years obsolete. Lit both by the sun and the dayside of the planet below, it hung like a fat, silvery torpedo whose sleek outline was broken only where the shuttle's dock gaped open to receive them and by the planetary observation platform in the nose. This was a large, glassed-in structure housing the telescopes and detection gear which, in normal operation, remained motionless with respect to the planetary surface while the remainder to the ship rotated for the purpose of supplying the Bugs not on observatory duty with artificial gravity. Since the shuttle was coming in to dock, however, all spin had been killed on the ship.

They crept up to the recessed dock—staggered up was more like it, Warren thought—and magnetic clamps shot out and drew them in. The vast outer seal of the dock folded shut. Several years seemed to pass before pressure built up around their ship and the inner seal opened to allow a crowd of about twelve Bugs to come through. The Bugs had magnets on the feet and four of them were floating stretchers ahead of them, and except for the medics with the stretchers all wore side-arms. But Warren got the impression that they wore them because it was regulations to do so, and that most of them were present simply because nothing much ever happened on the guardship and this was a break in the routine.

They didn't know how right they were, thought Warren grimly as he banged his wedge with all his force into the bulkhead beside him.

Immediately the escape hatch of the control-room blew open, the reactor inspection panels and all the other emergency exits large enough to allow egress to a man blew also. The main lock and the cargo hatch opened, too, but it was several seconds before anyone could emerge, the reason being the howling gale of chlorine which rushed to fill the vacuum inside the ship. But finally the men came kicking and struggling, and almost swimming out of all the exits, and Warren, because he had farther to go than the men leaving by the main lock, arrived when the *melee* was well under way.

The Bugs had the initial advantage of being held magnetically to the deck, which allowed them to take a steadier aim and to wreak terrible havoc among the attackers with their explosive bullets, but the advantage was short lived because the human attackers had mass, inertia and velocity, and they retained these attributes even when they were dead.

Warren narrowly avoided being hit by an officer whose head and chest was a cratered ruin and who was spinning slowly and inexorably towards the Bug who had killed him and who, apparently panic-stricken, was pumping more bullets into him in a vain attempt to halt his approach. The ghastly wreckage of the man collided with the Bug and both of them were left spinning helplessly a few feet off the deck. The Bug kept shooting wildly in all directions.

The dock airlock and the corridor beyond it seemed to be solid with struggling, kicking and spinning figures of men and

Bugs, with the two stretchers twisting like a pair of fantastic mobiles in the thick of it. It was a mess, an utter shambles. Several times Warren collided violently with men or Bugs and once he felt a sudden, agonising pain in the calf of his leg, but there was no smell of chlorine in his helmet and the pain grew duller after a few seconds. Explosive pellets flared and cross-bow bolts flickered past everywhere. He kicked past a Bug who had stopped an explosive bullet with its head and three Committee bolts with the rest of its body. He fended off a man with another bolt protruding from the front of his shattered helmet and he fought his way past the grisly remains of both species until he reached the corridor wall. A section of the ship's plumbing ran along the wall and Warren grabbed for it and began pulling himself along it hand over hand until suddenly he was in the clear.

He stopped to catch his breath, to curse the pain in the leg which the bulky shield kept him even from seeing, and then wipe away the sweat from inside his helmet with his forehead pad. The pad was already saturated so that it left foggy streaks on the glass instead of drying it clean, but Warren could see that other men, in steadily increasing numbers were also getting clear. Singly and in small groups they drifted past him, heading towards Control, Communications, the main reactor or to guard the all-important POW section. He realised suddenly that the obstacle he had just come through had ceased to be a menace, except possibly to navigation. The great mass of bodies still twisted and spun and rebounded off walls and each other—but lifelessly, the shooting had stopped.

He returned briefly to pluck a cross-bow from the air and take a quiver of bolts from an officer who would no longer need them. Feeling sick for a number of reasons, none of which was physiological, Warren set off for the section of the great ship assigned to him to be searched. Five other officers had been given the same duty and he had no way of knowing how many of them were still alive, he knew only that there was very little time to find what he was looking for.

By Warren's reckoning the assault men had about forty minutes air left in their tanks. On average, that was, because the tanks, hose and valves were hand-made and were therefore subject to unavoidable variations in performance—some would have more than an hour left, some considerably less. Inside

either of these time limits they might succeed in taking the ship, only to die a few minutes later as their air gave out. Many would be able to make it to the POW section where, because it involved too much time and trouble and waste of oxygen to evacuate and replenish it each time prisoners were transhipped there was an atmosphere breathable by humans. But that would simply have meant that they were prisoners again. There would have been no way of escaping from that single bubble of oxygen in a chlorine-filled ship, and without the Bugs to work the food synthesisers they would starve.

The next Bug ship to visit the place would be confronted by a terrifying enigma. Their solution to it might very well be to drop a planet-buster on the prison world.

At the thought, all the scenes of the past hour returned again in shocking, sickening detail. The bloody shambles inside the shuttle and at the dock, where weightlessness had added a slow-motion nightmarish quality as well as tripling the casualties, and the relative quiet and undramatic sight of dozens of men dying because their helmet seals had cracked. Self-doubt as well as self-disgust rose in him again and he had to tell himself sharply that all this had happened exactly as he had planned it—the long preparation and development work, the careful sifting of psychological types, the casualties even. The cost of success, if it came, was high, but the price was well worth it.

Warren moved in a succession of zig-zag dives along the wide, low, brilliantly-lit corridors of the ship, looking into the rooms which opened off them and then hurrying on. This particular section of the guardship was unfamiliar in that only the main corridors had been reproduced as tunnels at Hutton's Mountain, because no amount of psycho-stimulation of memories or peripheral images had succeeded in gaining data on the purpose or contents of these rooms. Some of the corridors had not been reproduced at all.

A Bug appeared suddenly from one of them to crash softly into the wall a few yards ahead of him. Warren jerked up his cross-bow, then relaxed again as he saw the number of bolts already in the target. He kicked himself past the dead Bug and went on with his search.

There was a distinct smell of chlorine in his helmet now. Apparently the blow he'd received on the back of his leg had torn his suit, but the battledress was so tight-fitting at the legs

and waist that it had taken some time and a lot of physical activity for the chlorine to begin penetrating to his helmet! Furthermore, his suit wasn't radiating nearly enough of his body heat. He was drowning in his own scalding sweat, his skull seemed ready to crack under the savage pounding of his headache, and the constant jumping and fending-off with his legs and arms was tiring him badly. He had trouble focussing his eyes and he was rapidly slowing down.

For minutes at a time he couldn't see where he was going. He diagnosed the trouble as a combination of age, imminent heat-stroke and possible oxygen starvation, and blundered on.

An unguessable time later he opened a door into a large, unlighted storeroom, the fan of brightness from the corridor illumination showing that the compartment seemed to be filled with giant bubbles. Warren began pounding out a signal with his wedge on the nearest metal wall, noting as he did so that the symptoms which had been troubling him were still present, but sharply diminished in severity.

Twenty minutes later he had a relay set up between the storeroom and the POW quarters and was pushing helmets, air-tanks and med-kits along it as fast as he could. As many as eight helmets were drifting down the corridor at one time, to be picked out of the air by the man stationed at the other end of it and given another push along the next leg of their journey. There were several hundred fish-bowls and regulation attachments for service battledress in the storeroom and Warren knew that if he had time to check serial numbers he would find his own in the pile, because every prisoner who was processed by the guardship had to leave his helmet behind. The Bugs must have had thousands of helmets left with them since the POW planet had been initiated, and it had been natural to assume that they would stack them somewhere until sheer numbers made them a nuisance and they were destroyed. The Committee had taken a gamble on this, and it had come off. By the look of this storeroom the Bugs didn't spring-clean too often.

Kelso and two other officers arrived, and while the others relieved Warren in the storeroom the Lieutenant proffered a Bug pad on which he had written with Bug stylus the news that the main centres of the guardship had been secured. As a postscript he had added that the Marshal's air must be running low and respectfully suggested that he conduct him to

the prisoners' quarters. Warren scribbled out his approval both of the Lieutenant's report and suggestion, and together they launched themselves along the corridor.

It happened at the third intersection. Warren had just checked his last jump with his feet against the wall when there was suddenly no air to breathe. He sucked desperately but his lungs weren't getting anything. His chest was on fire, a throbbing black cloud cut off his sight of the corridor, even of the sweat-smeared interior of his helmet, and his head began to pound louder and louder until the sound became a series of monstrous, thudding explosions.

After all I've come through, he raged silently, what a way to die . . . !

He felt Kelso grip his arm and he twisted frantically, the instincts of a drowning man making him kick and claw and hold on for grim life. He felt his fingers sink into the wicker-work of Kelso's suit, felt the thin canes bend and break under his frenzied grip. A tiny, sane portion of his mind told him that he was endangering the Lieutenant's seals with his struggles had perhaps already condemned Kelso to death with him, but the tiny area of sanity was overwhelmed and obliterated by sheer panic . . .

He came to with the slightly sour air of the prisoners' section rushing into his lungs, its progress only slightly impeded by the fingers being held loosely over his mouth. Kelso was astride his chest, his helmet was smashed open in front and the Lieutenant's fingers were there to prevent Warren breathing in the broken glass which was floating about. He tapped Kelso's arm to let him know that he was all right, and the grinning Lieutenant let go and carefully smashed in the front of his own helmet with a wedge. Together they began chipping at the seals.

It was sheer bliss to wriggle out of the ungainly contraption of basketwork and glass and to be able to twist and to bend at the waist again. All over the vast room the men were struggling out of the baskets and revelling briefly, very briefly, in their freedom before clamping on service helmets and six-hour tanks to rush away again to relieve men still holding vital positions in wicker suits, or to search the area for people who had run out of air on the way in. There were a lot of cases like

that, Warren saw ; men who had to be broken out of their armour and given artificial respiration, or have their hearts shocked back into motion with a shot from the med kits. And there were those who did not respond. They drifted weightless and outwardly unharmed about the room, having missed victory and life by only a few minutes. Warren felt particularly bad about them.

He became aware that Kelso was staring at his leg. Warren twisted around to see what the other was looking at and discovered a cross-bow bolt neatly transfixing his left calf. He began laughing and found that he had to make a tremendous effort to stop. He drew the injured leg up to where he could work on it, then carefully removed the flights from the bolt and pulled it free. He wanted to yell out loud with the pain of it, but he kept his face impassive and the only sound he made was caused by heavy breathing through his nose.

After his shameful display of panic in the corridor and his fit of hysterical laughter in here, Warren felt that he had to do something to retrieve his reputation in Kelso's eyes. His behaviour in the corridor had been bad, even cowardly. It wasn't as if he were the only man to run out of air today. And now he had to pretend that he wasn't the gutless individual that he knew himself to be.

He held the bolt where the Lieutenant could see it, then he said drily, "And all the time I thought the men liked me . . ."

"Oh they *do*, sir!" said Kelso.

Warren looked away from the Lieutenant's face quickly, feeling embarrassed. It was wrong that a mature, intelligent, resourceful and very brave man like Kelso should look at him the way a dog looks at its master.

An hour later Warren, in service lightweight suit with long-duration tanks, sound diaphragms and a measure of air-conditioning, was searching the ship again. His party included Kelso and the officer who had piloted the shuttle. On the surface it looked as if they had won, but the guardship was a very large vessel and somewhere inside it there might be a Bug desperate with the knowledge of defeat who was planning something calamitous in the way of destruction for itself and its ship, not to mention the prisoners it contained. This time the whole ship was being searched. Thoroughly.

It was Warren's party who found the last Bug survivors. There were two of them in the compartment, spacesuited but

unarmed. Around them floated three pressure litters, the type of stretcher with plastic envelope used for transporting casualties in airless conditions, and in each one of them there was an oily, pallid, twitching *something*. It took a few seconds for them to realise what it was they were seeing.

"If there's anything in the Galaxy more horrible-looking than a Bug," said Kelso finally, "it's a young Bug . . ."

twent y - one

The first thing Warren did after transferring the Bug prisoners to their quarters in Hutton's Mountain was to move Peters and Hubbard to the guardship. He had a long talk with the Political Officer, during which Hubbard came to see things his way, then released him safe in the knowledge that the other would not talk out of turn. With Peters it was different. Warren saw to it that the Fleet Commander had every possible comfort except that of conversation, but he had no intention of talking to Peters until he was good and ready. He could not risk having Peters throw a spanner in the works at this late stage. And with the Commander rendered harmless he was able to devote all of his attention to the ship and to the officers who would man her.

He made it quite clear from the first that the ship would be manned.

Warren himself did not leave the ship, although he kept in touch with Fielding and Hynds by the Bug radio equipment taken from the battleship. He needed Hynds to track down information of obsolete Earth and Bug weapons and control-systems and Fielding, perhaps unknown to herself, was supplying the psychological know-how which was helping him to separate the sheep from the wolves. Hutton visited the ship many times.

The Major expressed deep concern over the age, appointments and general condition of the vessel, at the same time giving forth with a constant stream of suggestions as to how the hopelessly obsolete equipment might be thrown away, modified or completely rebuilt to the best advantage.

It was his considered opinion that the great, fat, sow of a ship would disintegrate the moment thrust was applied and that its weapons were a deadlier menace to the ordnance officers than

to any target, but at the same time the hints he let drop to Warren about wanting to go along were many and quite unsubtle. Knowing that Hutton was merely reacting to the magnitude of the technical challenge of making the ship operational again, and that the Major had become too much of a pacifist to really fit into the ship's crew, Warren's treatment of these hints was equally unsubtle. He said "No."

So the days passed into weeks, with the shuttle plying between the ship and the surface as often as twice a day. Going down it carried Bug provisions for their prisoners, all the Bug literature, records, charts, electronic and optical equipment together with all the machine tools and mechanical oddments which could be spared. Coming back it brought food, the chosen Committeemen and hundreds of trays of the weed which Hutton had developed to supply the ship with air. Gradually the chlorine was bled into space, and deck by deck it was replaced by oxygen-rich air until the entire circulation system carried a human rather than a Bug atmosphere. The work of modifying and provisioning the ship accelerated rapidly after that.

Interior lighting was toned down to a comfortable intensity. Where necessary the Bug controls were reshaped to suit human hands and, as far as was possible considering their present close proximity to the planet, their weapons were tested. The men were fast getting used to ceilings which gave only a few inches of head-room, to sitting cross-legged in Bug chairs and to sleeping in the big oval beds which were like over-padded hammocks. Warren had given permission for anyone who needed them to have necessary items of furniture brought up in the shuttle, but he discovered that there was a wide-spread feeling among the men that anyone who couldn't sit in a Bug chair or sleep in a Bug bed was something of a sissy.

Morale among the entire crew was very high and it was clear that no good purpose would be served by remaining in orbit around the ex-prison planet any longer, so on E-day plus eighty-four Warren went down in the shuttle to give his final instructions and to say good-bye.

He took Peters and Kelso with him, and when they landed he told the Lieutenant that he would be back in an hour and to wait for him at the ship. He had a lot to tell the Fleet Commander and none of what he had to say was for the ears of Kelso or any of the other hide-bound Committeemen on the

guardship, so Warren talked a lot during the walk from the shuttle to the ruins of Andersonstown. But the Commander did very little talking back. Perhaps the reason lay in the devastation around them and the acrid, burnt smell which still hung in the air, or may be it was simply that the Commander was too shocked at what the Marshal was confessing to for him to discuss it just yet.

They entered the building chosen for this final meeting, a storehouse near the harbour which was one of the first to be rebuilt. Inside, the benches were filled with the more active anti-Committee officers, the higher level technicians from the mountain and the other members of Warren's staff. He knew that his face looked grim as he took up his position with the Fleet Commander behind the table before them, and set the fish-bowl he had been carrying down on the table. The prospect of confession is never a pleasant one, and Warren alone knew how much he had to confess.

Harshly, he began, "We will leave as soon as I return to the ship. Before saying good-bye I have certain, uh, explanations and instructions for you. The first is that any officers among you who are planning how best to avoid the rescue force and a return to active service can relax. I will not be back for you. Nobody will be back for you, ever . . ."

The expressions of wary hostility had changed suddenly to bewilderment, and Warren wondered if the gulf which had opened between these people and himself over the past months could be closed by a few minutes conversation. It would be nice if it could, but standing in his trim battledress uniform among all the kilts and shapeless leather pants he felt so alien and different that he might have been a Bug facing them.

"The reason for this is a situation which was apparent even before I was taken prisoner," Warren continued, "although it surprised me that the total collapse of our military organisation could come about in the three years that I've been here. However it did happen. The service broke up through political mis-management and wholesale desertions and the simple shortage of proper officers and maintenance technicians. The Fleet Commander will confirm that we have up-to-date and accurate intelligence in this matter. Even in my time this process was so well advanced that the possibility of the prisoners here being rescued was an extremely remote one, despite all that I said, or led you to believe, to the contrary."

You will want to know that

John Carnell is at present working on an entirely new series to be called *New Writings in S.F.* Four new collections will appear each year.

Each volume will contain hand-picked stories from all over the world. They will be published initially in hard-bound editions by Dennis Dobson and subsequently by Corgi Books. Look out for the first of these later this Summer.

"Knowing this, my decision to back the Escape Committee requires some explanation . . ."

Very briefly Warren outlined again the situation on the prison planet as he had seen it on arrival ; the two mutually hostile groups whose dislike was on the point of flaring into violence, the breakdown of discipline and respect for authority, and the apparent ascendancy of the Civilian over the Committee side which was simply driving the Committeemen into a tighter and more fanatical group. The considerable authority and ability of the Fleet Commander, aided by environmental factors and the purely biological forces at work—and here it should be said that the prisoners were held to the planet much more tightly by their growing number of children than by the Bug guardship—was unable to control these fanatics who placed loyalty to the service and their responsibilities as officers before comfort and security and female companionship. They placed Honour above all else, and Warren had decided that the only way to control such narrow-minded yet admirable men was to join them and lead them in the general direction they wanted to go.

Not to have done so would have resulted in an Escape Committee, so shrunken in size that it would be plain even to themselves that escape was impossible, which had tight communications and organisation, turning on the Civilians who had betrayed them. The Civilians were in the majority but were not organised at all. After many years, perhaps many generations of strife, the situation would have found its own level, but in the process all the valuable skills and knowledge of the prisoners would have been lost. In a very short time the planet would have been populated by little more than savages.

By siding with the Committee he had caused the second continent to be opened up, which in turn forced into being the network of communications and commerce by ship, glider and helio relay. None of this would have been possible without Committee drive and organisation. He had also, by lying outrageously regarding his reasons for wanting it, caused a vast amount of technology to be recorded and distributed in written form, and he had set up the machinery for self-training and teaching. The result was that there was now little likelihood of their knowledge, particularly the space and related techno-

logies, dying with them. In any event the Bug gadgetry he was leaving behind would ensure its being kept alive.

There had been times when Warren had wanted to do it the Fleet Commander's way, especially during those periods when the Civilians and Committeemen seemed to be getting along well together. But then one of his men would say something, or there would be a beating-up or some thoughtless destruction of Civilian property, and Warren would realise that there was no easy way out. Undermining the Committee from within was simply carrying on the job which the Fleet Commander had started, and the result would have been equally unsatisfactory. His men were potential trouble-makers whether they called themselves Civilians or Committeemen. They were the type of men who made history, usually of the wrong sort. They were the wolves among the sheep. The only thing to do with wolves was to get rid of them, one way or another . . .

" . . . There was always a strong possibility that the Bugs would realise at the last moment that the site was an ambush," Warren continued, " and dump a missile on us. That was my reserve plan if the first one failed. It would have been a dramatically simple way of disposing of the wolves, because it was the most loyal Committeemen who stayed on the site during the final hours. But these were fine men—good, able officers who were not to blame for what they were and the trouble they might ultimately cause. The fact that they sometimes went off the rails a bit with Civilians and some of the female officers, didn't make me feel any better about sentencing them to death, because I knew, and so did they, what a bloody massacre even a successful escape would be. I liked those men and wanted to kill as few of them as possible.

" What I mean is they weren't very gentle or thoughtful people," Warren went on awkwardly, " but they had enthusiasm and they would never admit that anything was impossible. They still won't and I still like them. What they tried to do . . . what we *did* do was . . . was . . ."

" Glorious," said Peters softly.

Warren looked quickly at the Fleet Commander, suspecting sarcasm, but he was mistaken. For several seconds he stared down at his helmet, unable to speak.

" What will you do now, sir?" said Hutton quietly.

Clearing his throat, Warren said, " Our interstellar culture, along with that of the Bugs, is in the process of falling apart.

I have a large ship in reasonably good condition. I have upwards of one thousand men aboard who, both crew and assault commandos, are personally loyal to me, and I have an officer capable of advising me on the political aspects of any situation. It should be possible for us to cut ourselves a chunk of this disintegrating culture, hold it and impose on it some sort of order which would halt or possibly reverse the tendency to regress towards savagery which occurs with isolated colonies previously dependant on the mother world. That is what I will try to do. Meanwhile, you will have a much harder job.

"If you don't believe that," he went on grimly. "just think for a minute what exactly it is that you are."

Warren stared into the faces before him, because the bloody nightmarish pictures which were always on the fringe of his mental vision were trying to take form again in the air between them, and this was the only way he had of fighting it. He was telling them the reason why one hundred and forty-two assault men had died—the *real* reason, not just the one that the men themselves had thought they had.

He said, "You are a planet of scientifically trained, psychologically stable and highly intelligent human beings who have, as far as was possible, had all the unstable and unsane influences removed from among you. You are in a unique position, therefore, and I expect a lot from you and your descendants. Some of you may have thought that you were ducking your responsibilities by going Civilian, but this isn't so. You have obligations immeasurably stronger and deeper than any simple oath of service, the responsibility of the civilised person towards the savage, of the haves for the have-nots.

"I cannot tell you in detail what you should do," Warren continued. "My advice is that you remain underground, as far as technology is concerned, for another ten years so as to be on the safe side if a Bug ship should turn up—but my guess is that if one doesn't arrive within the next three years it won't come at all. Meanwhile you will be keeping alive the science of an interstellar culture and seeing to it that the kids who are beginning to clutter up the place learn a lot more than wood-carving—a whole lot more!"

"At the same time you will try to love and cherish and treat as your very own those Bug prisoners at the mountain. You will see to it that they are healthy and comfortable and as happy

as possible so that they will not be averse to breeding in captivity like ourselves. You will then see to it that your own darling children get plenty of chances to see theirs—you could arrange it like a visit to a zoo, at first, but later you will teach them to respect these chlorine-breathers and to communicate with them. There will be difficulties, of course, but it isn't entirely impossible for a youngster to make friends with his bogey-man. You have some very good psychologists here . . ."

The picture forming before him now was from a bright and, he hoped, not too distant future rather than from the immediate and bloody past. Firmly, he went on, " Eventually—in six or seven generations from now, perhaps—you will be ready to go out. All around you will be the fragments of two promising interstellar cultures who met before either was ready for a meeting. Your job will be to pick up the pieces, *all* the pieces, and put them together again.

" With any luck," he added hopefully, " one of the biggest and most civilised pieces might have been mine . . ."

They were all staring at him, Fielding, Hutton, Hynds and the others, as if he was something new and frightening, something accepted as a known quantity which had turned suddenly and bitten them. Warren saw now that his confession of lying and treachery and wholesale double-dealing was of secondary importance, that he had given them something much more important to think about. The fact that they did consider it more important, and the expressions on their faces as they stared through him into space and future time, told Warren what he wanted to know. The job would be done. He was content.

" Well," he said finally, lifting his helmet and turning to go, " I guess that's it, then . . ."

Kelso burst into the room a few seconds later, in a near panic because the Marshal had been gone longer than the stipulated hour and the Lieutenant had begun to think that harm had come to him at the hands of the Civilians. The Lieutenant was in time to see a sight so mind-staggering that he felt himself guilty of a most unmilitary gape. It was the sight of a roomful of Civilians standing rigidly to attention while the Fleet Commander, old man Peters himself, tore off a salute to the Marshal which was the tightest, smartest and plainly the most respectful salute that Kelso had ever seen.

james white

survey report—continued

The inference is very plain that there is a complete change in reading habits and a great deal more reading being done, too—library borrowers up 3%, reading as a hobby up 24% ; where now the much-vaunted time-waster, TV ? (Which did not even turn up on the hobbies' chart—4% in 1958).

Our statistics still show that science fiction is very much a masculine form of entertainment, with the technically-minded or technically employed, the student, the artisan, the *thinker* (whether he be bricklayer, bus driver, insurance clerk or company director), an ardent devotee of the possible worlds of the future. The past few years of economic growth within the country show up in the salaries increase, with a 5% rise in the over £1000 a year class and a 3% rise in the £750 - £1000. It would seem, however, that the middle income brackets and the middle age groups have almost dropped away.

The interesting factor from my point of view is that the big changes started coming immediately after our last Survey in 1958. At that time Import Restrictions, imposed as a wartime economy, were relinquished, just at a time when the expansion of the paperback field was under way. Apart from the internal battle for space on the bookstalls (the 'digest-size' magazine has been almost completely squeezed out now) there was competition from American imports as well as a similar problem in Australia, where we lost over half our export market (which had been very healthy for fourteen years). Some wholesale distributors, particularly in the Midlands, turned over exclusively to handling paperbacks and the s-f magazines began to disappear from view, either under the counter or not available at all.

While this is apparently a dismal picture for the specialised science fiction magazines, the fact remains that there is more s-f being read today than at any time during the past twenty years and it is much more easily available. Hard- and paper-cover s-f has expanded, most daily and weekly newspapers now devote regular columns to reviewing the genre (almost unknown five years ago) and it appears far more frequently on TV and radio. The day of the specialised s-f magazine, published for the devout band of followers, is almost over. S-F is moving out into the broader stream of general literature.

John Carnell

farewell editorial

It may or may not be significant that this last Editorial by myself is being written on Friday the 13th, according to how superstitious you may be. From my point of view it is pure coincidence, as this could have been written yesterday or tomorrow. The fact remains that I have had over six months to think over how to announce the last Nova Publications' issue of *New Worlds Science Fiction*—and the task is no easier now than it appeared last October.

Basically, the reasons why we are ceasing publication of this magazine and also *Science Fantasy* are explained in the *Survey Report* elsewhere in this issue. It has been very evident for the past two years that s-f magazine publication has been on a waning market while paperback sales steadily rise. Unfortunately, it was impossible for us to turn over to a different format, but the new owners, Roberts & Vinter Ltd., are planning to make the changeover and we certainly wish them every success.

At this stage, too, I can officially state that Michael Moorcock will be editing *New Worlds Science Fiction* (probably as a bi-monthly at first) and that I think he will make a very capable editor indeed, having had four years editorial experience with Fleetway Publications and been steeped in the lore of s-f for many more. Despite his success as a *fantasy* writer, he is unlikely to allow this to influence his judgment on *science fiction* stories. *Science Fantasy* will be edited by Kyril Bonfiglioli, unknown to the majority of s-f readers but a man with a vast background of s-f knowledge.

All that remains for me to say at this sackcloth-and-ashes period, is to thank everyone (authors and readers alike) for the wonderful support we have had over the years and my personal thanks for the great amount of pleasure I have derived from knowing so many of you or exchanging correspondence with you.

Let us not look upon this as the end of the line, but merely a natural stage of metamorphosis in the development of science fiction.

john carnell

book reviews

by leslie flood

british—hardcover

With a sad note of finality I clear the review shelf for the last time in association with your Editor and this magazine, and I trust that the reasonably impartial guidance I have tried to give over these many years has been as useful a service for you as it has been a pleasure for me to perform.

I could not have wished for a more suitable novel for this occasion, one so mordantly successful as only Robert Sheckley could write, than **Journey Beyond Tomorrow** (Gollancz, 15/-) based on the *Magazine of Fantasy & S-F* serial "Journey of Joenes." This is a sweet-sour allegory of a modern Gulliver surveying the chaos of 20th Century civilization and its inevitable catastrophic doom, brutally sacrificing, by the way, the sacred cows of the American Way of Life in particular. Ingeniously conceived as a series of revelatory flashbacks by different chroniclers, Joenes' incredible brushes with the harsh realities of the rat race and his involvement with the forces of anarchy, bureaucracy and military lunacy, make as savage and funny a satire as I have ever had the sadistic pleasure of enjoying.

The Best from Fantasy & S.F. 11th Series, edited by Robert P. Mills (Gollancz, 18/-) contains, as ever, a superlative collection of stories from that magazine, whose themes range unconfined from computers to vampires, from interstellar wars to haunted villages. Comparisons would be invidious for there is a story for every taste and all are memorable. Present editor Avram Davidson leads off with a cautionary tale of a poor devil of a fellow beaten by an adversary of diabolical genius in "The Sources of the Nile," followed by a Jay Williams' vignette about a childish problem

of friendship on an alien planet—"Somebody to Play With." Evelyn E. Smith's vampire story "Softly While You're Sleeping" contains that wonderful line 'I dislike cheap symbolism,' she said, 'even in a vampire.' Isaac Asimov lifts the lid on unofficial computer operating techniques in "The Machine That Won the War." Jody Scott's off-beat "Go for Baroque" (ouch!) confronts psychiatrists with an hilarious character from Pluto, but Poul Anderson's "Time Lag" lacks verisimilitude and is outclassed in this company in its attempts to wring something out of the procedure of interstellar conquest.

John Anthony West tells of the awful fate of a vegetative TV-viewer in "George," and Clifford Simak does his rural doctor act with alien-conferred powers that have world-wide effect in "Shotgun Cure." (I wonder just how many times he has used this theme). John Berry touches on Tibetan mysticism in "The One Who Returns," while Kurt Vonnegut, Jr. turns in a grotesque parody of ultimate equalisation in "Harrison Bergeron" and the strange Charles Finney contributes a parable in his typically cryptic style, "The Captivity." Cordwainer Smith (probably the most underrated fantasy writer of them all) brilliantly gives us an esoteric glimpse of an enigmatical future in "Alpha Ralha Boulevard," and Gordon R. Dickson rounds off with a finely-written "The Haunted Village" heavy with the atmosphere of the ominous unknown. Thoroughly recommended.

Moon Base by E. C. Tubb and **The Deep Reaches of Space** by A. Bertram Chandler are the first two titles in a new S-F series (Herbert Jenkins, 12/6d each) which apparently intends to aim its sights no higher than a competent level of action-slanted science fiction which has its market (and indeed could safely accommodate at least half of the current magazine output). In fact, Tubb's story was serialised in these pages last year under the title "Window on the Moon" and is an exciting adventure novel of espionage in the Lunar bases of the major Earth powers. Chandler attempts some ingenuity in his novel of interplanetary space-travel hazards by having an s-f writer's ego transferred by drugs to the body of a space-liner's officer. Old hat stuff, but reasonably well done.

leslie flood.

postmortem

readers' opinions and comment

The Last Post

Dear Mr. Carnell:

Mr. Michaels writes (*New Worlds*, March) "Too often the s-f author with delusions of grandeur, produces a story which is unintelligible. He is so keen on convincing the reader that it is LITERATURE that's being read or a vast scientific truth propounded, that the entertainment content is reduced to nil." Mr. Michaels' criticism, apart from its vagueness ("vast scientific truth"?) is patently absurd. How can one possibly separate literature from entertainment? Because 90% of s-f is not *literature* or good literature. Mr. Michaels should not be deluded into thinking that there is no potential for literary content in s-f.

However, I am more concerned over a particular application of Mr. Michaels' letter. I have the uncomfortable feeling (though I hope that I am mistaken) that Mr. Michaels is referring especially to J. G. Ballard, and "Terminal Beach" may reinforce his views. If Mr. Michaels is puzzled by some of Ballard's stories, I suggest that he read them slowly, as 'literature,' and not in hurried snatches as he would read a thriller. Ballard does not only communicate by factual exploration, but also the inventiveness of his language. In this he is a poet, and should be read as such.

I would also apply the word "poet" in answer to Terence Bull's criticism of Aldiss's "Skeleton Crew." One does not wish to read such hypocritical statements as Mr. Bull's "To my unsophisticated mind," etc. This is an escape route whenever one begins to speak of s-f as literature, but I am sure even Mr. Bull can appreciate that Aldiss has a greater command of language and therefore effect, even in his poorer works, than most other s-f authors. Thus Aldiss can also be called a poet, and this quality sustains his works.

I would only criticise Aldiss and Ballard on their occasional repetition, e.g. "Skeleton Crew" has unfortunate echoes of "Comic Inferno" in *Galaxy*, while Ballard's "Time of

"Passage" is a blatant copy of "Mr. F. is Mr. F." Ballard is particularly liable to this fault.

Re the *New Worlds* anthology, I find that my own idea, in embryo, is forestalled. I can only heartily second Mr. Orme's suggestion. I have just read *The Best from F&SF, 11th Series*, and I anticipate harsh reviews from Mr. Flood as he compares it to previous anthologies. The stories are not, perhaps, up to former standards individually, but I found them unusually satisfying *as a collection*. This is where I think *F&SF* scores over *New Worlds*. It has more variety especially where humorous writing is concerned. To introduce more variety into your own collection, a Nova anthology might be presented in which selections from *Science Fantasy* could be included.

Mr. Orme also mentions the difficulty of selecting a novel for the 1963 Hugo Award. Is Bradbury's *Something Wicked This Way Comes* eligible? I think this a much under-rated work (I notice that it does not seem to have been reviewed in any Nova publication).

J. S. Torr,
Orpington, Kent.

Dear Sir:

The somewhat disturbing news of the cessation of *New Worlds Science Fiction* came as a most unpleasant surprise. To say that it was somewhat of a shock for a magazine of such long standing to disappear at such very short notice would be a total understatement and I think that a great many s-f fans will view the passing of *New Worlds* and its younger partner, *Science Fantasy*, with considerable misgivings.

This sad event will have far more serious consequences than many fans will at first realise, for this is virtually the end of wholly British s-f publishing. Granted that there are still several excellent reprints and imports from a certain ultra s-f conscious nation across the Atlantic still available, but they are poor substitutes for the two magazines which have provided a platform for British s-f for so many years.

New Worlds had, or for the moment, still has, a flavour all its own which, whether due to preferences of editing or to the writers as a whole, has never been successfully imitated by the American publications. This is, I suppose, a good thing in itself, for it has given s-f an altogether more recent form of literary endeavour in this country, an overall character quite distinct from its transatlantic parent.

Now that *New Worlds* is about to go the way of certain other, once well-known and still remembered publications, this unique flavour will be lost to many would-be fans at present hovering on the borders of serious s-f interest. It is indeed a great pity that this has had to happen, but now that its fate is sealed, many enthusiasts will continue to remember it with pleasure long after the last copies have been run from the press.

Thank you *New Worlds* for doing such a fine job for so many years and thank you Mr. Carnell for producing such a fine magazine!

No, *New Worlds* will not be forgotten!

Henry J. Gamble.

Whitstable, Kent.

Dear John,

It is only of secondary importance that *New Worlds* and *Science Fantasy* are folding. The main tragedy is that the magazine is losing one of its most open-minded editors. As I have said elsewhere, s-f often claims to be far-out when, in fact, it rarely is. It *should* be far-out—it needs editors who are willing to take a risk on a story and run it even though this may bring criticism on their heads.

You have published over the years a great many controversial stories and a great many good straight-forward ones. You have also published the early work of most of our best British writers. You have discovered, encouraged and advised scores of young writers. It is probably thanks to your early encouragement that we nowadays have so many good writers in this country. The magazines have had their ups and downs, suffering from the fact that the moment you have trained a writer up to a certain standard, he has left you for the more lucrative American markets. How, I wonder, is the potential to be found and trained in future?

Mike Moorcock,

London, W.11.

Dear John,

As a reader I feel badly enough about the demise of *Nova*; I can barely imagine your own reactions, as editor. *New Worlds* has been part of the s-f scene during most of the time that I've been reading magazine s-f; the only magazine that I miss more is *Science Fantasy*. It seems almost incredible that, having become far and away the best publication of its kind, it now has to fold. If it's any consolation, I think that

most of your long-time readers, like myself, will understand and appreciate just how much you've done to keep the s-f field in existence in this country since early post-war days. Although I must confess that I only ever wrote you *one* letter, and that was after the first issue . . . still, I never wrote at all to any of the others! Even *Authentic* . . .

Jim Cawthorn,
Gateshead 8, Co. Durham.

Dear Sir:

I would like to congratulate you on your magnificent magazine, which has greatly improved over the years. In the past few years it has adopted a more intelligent attitude towards the science fiction field, which today tends to lean more to the literary sense. Which is a good thing in many ways, although this could lead to over-characterisation and subsequently plots would suffer (and do suffer).

J. V. Parsons,
Tolladine, Worcs.

Dear Sir,

I was indeed sorry to hear of the demise of your two science fiction magazines. Yours were the only serious, completely serious, efforts in the English language. I hope John Carnell will in the near future be editing an s-f magazine again.

Bruce Robbins,
Massachusetts, U.S.A.

Gentlemen:

I have followed your excellent magazines for over five years and have now heard the sad news about Nova's demise. Rather than lament about an event I cannot stop, I would much rather thank you for years of good reading. You have done your job well.

Jeremy A. Barry,
Bloomington, Illinois, U.S.A.

(Since the foregoing letters were received, the circumstances have changed insofar as both New Worlds and Science Fantasy will now continue under another publisher and with two different editors. It is inevitable that the personalities of the two magazines will change, but we at Nova Publication wish the new owners and editors every success.—John Carnell).

This should interest you . . .

Today photographs are being taken at speeds up to 10,000,000 pictures a second. Scientists "see" where there is no light; they examine the internal structure of huge metal castings; they "slow down," photographically, phenomena too fast for the eye to see; they measure every slightest vibration and stress in moving machinery.

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